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INTRODUCTION

The ability to select the proper crop variety that will give the best performance in a given set of environmental conditions may determine the success or failure of a crop for a given year. The wheat industry is no exception.

This wheat variety description handbook is the result of suggestions from the Wheat Industry Resource Committee. The committee is composed of USDA specialists from Agricultural Research Service, State and Federal Extension Services, Economic Research Service and wheat producers. The committee objectives are to identify problem areas and provide educational leadership in the solution of problems relating to the wheat industry. This document is intended to be a ready reference for the staffs of public and private wheat industry organizations that are involved in the production, identification, and classification of new and old wheat varieties.

The Agricultural Research Service and the Extension Service are pleased to have participated in the development of this handbook. Descriptions of new varieties will be added to the handbook as they are released.



The object of the present work is to give the reader a general idea of the history of the world, from the beginning of time to the present day. The work is divided into two parts, the first of which deals with the history of the world from the beginning of time to the present day, and the second of which deals with the history of the world from the present day to the future.

The first part of the work is divided into three sections, the first of which deals with the history of the world from the beginning of time to the present day, the second of which deals with the history of the world from the present day to the future, and the third of which deals with the history of the world from the future to the present day. The second part of the work is divided into two sections, the first of which deals with the history of the world from the present day to the future, and the second of which deals with the history of the world from the future to the present day.

The second part of the work is divided into two sections, the first of which deals with the history of the world from the present day to the future, and the second of which deals with the history of the world from the future to the present day.

GLOSSARY

- ACUTE: Ending in a sharp point.
- ADAPTATION: Recommended environmental conditions where a cultivar should be grown.
- ADRESSED: Lying flat against, e.g. the rachilla against the palea in the grain of barley and oats.
- ALEURONE: The outermost layer of the endosperm.
- ANTHERS: The part of a stamen which produces pollen.
- FERTILE: Anther containing viable pollen.
- STERILE: Anther incapable of viable pollen production.
- Figure 6.*
- ANTHESIS: Stage or period during which a flower is open. In grasses, when the lemma and palea are expanded and the anthers and stigmas are mature.
- ANTHOCYANIN: Pigment producing the reddish or purplish coloring in the flower and vegetative parts of plants.
- APEX: Tip or summit.

- APHID: An insect living on plants and sucking their juices:
Same as *Plant Louse, Greenbug.*
Figure 15.
- APICAL SEGMENT: The uppermost segment of the rachis.
Figure 4.
- APICAL SPIKELET: The spikelet occurring at the apex (tip) of the spike or panicle.
Figure 4.
- ASYMMETRICAL: When the two sides are unequal.
- AURICLES: Claw-like outgrowth arising at the junction of the leaf blades and sheath, present in wheat, rye and barley, absent in oats.
Figure 2.
- AWN: The bristle-like projection arising from the top of the glume and lemma in barley, the top of the lemma in wheat and from the back of the lemma in oats.
Same as *beard and scur.*
Figure 4, 5.
- AXIS: The main stem or central column upon which other parts are borne.
Figure 1.
- BEARDS: The bristle-like projection arising from the top of the glume and lemma in barley, the top of the lemma in wheat and from the back of the lemma in oats.
Same as *awn and scur*
Figure 4, 5.

- BEAK: The extension of the keel at the tip of the glume or lemma.
Figure 5.
- BEVEL: A depression variable in depth in the base of the lemma rounded in barley, transverse in oats.
- BIOTYPE: Population genetically uniform for one or more morphological characteristics or reaction to diseases and pests.
- BLOOM: Waxy coating present on the surface of a plant structure.
Same as *glaucous*.
- BLADE: The part of a leaf above the sheath.
Figure 2.
- BRACT: A modified leaf-like structure occurring in the inflorescence.
- BRUSH: Tuft of hair at the tip of the wheat grain.
Remnant of stigma.
Figure 7, 14.
- CALLUS: A hard crusty thickening of plant tissue.
- CARYOPSIS: A single-seeded, dry, indehiscient fruit, with the fruit and seed forming a single grain as in wheat. The lemma and palea are usually fused to the seed in oats and barley.
Same as *grain, kernel and seed.*
Figure 7.

CHAFF: The outermost pair of bractlike structure of each spikelet.
Same as *glumes, hull and husk.*
Figure 5, 9.

COLEOPTILE: The protective leaf which in the cereals encloses the plumule.

CEREALS: Any grass yielding grain used for food as wheat, rice, barley, etc.

CEREAL LEAF BEETLE: *OLEMA MELANOPUS* An insect attacking the leaves of wheat, oats, barley and other grasses.
Figure 15.

C.I. NUMBER: Cereal Identification Number assigned by the curator of the USDA Small Grains Collection.

COLLAR: The structure (neck) at the top of the culm above which lies the spike.
Figure 1.

CONCAVE: Curved as the interior of a sphere. (Shaped as the inside of an egg.)

CONVEX: Curved as the exterior of a sphere. (Shaped as the outside of an egg.)

CROSS - POLLINATION: Transfer of viable pollen from male parent to flowers of female plant.

CSSA:	Crop Science Society of America
CULM:	The jointed stem (straw) of the grasses. Same as <i>stem</i> . <i>Figure 1.</i>
CULTIVAR:	Variety developed for cultivation. Same as <i>variety</i> .
CYTOPLASM:	Living substance surrounding the nucleus of a cell.
CYTOPLASM MALE STERILITY:	Refers to a special type of male sterility in which the cytoplasm, not the genes of the cell nucleus, causes sterility. Male sterility makes cross-pollination possible on a commercial scale.
DECUMBENT:	Curved upward from a horizontal or inclined base, said of stems or culms.
DEFLEXED:	Bent sharply downwards.
DISTAL:	Towards the apex, furthest from the base or main axis.
DIVERGENT:	Set at an angle to one another, "herringbone" fashion.

DORSAL: The top or back of the caryopsis on which the embryo is situated.
Figure 7.

DROOPING: Erect to spreading at base but inclining downward above, as the branches of a panicle.

ELONGATE: Lengthen or stretch out.

EMBRYO: The rudimentary plant situated towards the base of the dorsal side of the caryopsis.
Same as *germ*.
Figure 7.

ENDOSPERM. The reserve food material in the caryopsis lying outside the embryo (flour in wheat).

ENVIRONMENT: The sum-total of external influences acting on an organism.

FEMALE: In hybrid seed production, the seed-bearing parent from which hybrid seed is harvested.

FERTILE: Capable of producing seed. A fertile floret may be pistillated or perfect (with pistils and stamens).

FERTILE ANTHER: Anther containing viable pollen.

FLAG LEAF: Top leaf, no other leaf above.
Figure 1.

- GERM: The rudimentary plant situated toward the base of the dorsal side of the caryopsis. Same as *embryo*.
Figure 7.
- GLUME TEXTURE: The stiffness of the glume in wheat, which is described as hard (rigid) or soft (pliable).
- GRAIN: A single-seeded, dry, indehiscient fruit, with the fruit and seed forming a single grain as in wheat. The lemma and palea are usually fused to the seed in oats and barley. Same as *caryopsis*, *kernel* and *seed*.
Figure 7.
- GREENBUG: Plant louse, an insect living on plants and sucking their juices. Same as *aphid*.
Figure 15.
- GROAT: The caryopsis in oats after the removal of the husk. (lemma and palea)
- HAND CROSS: Cross-pollination in which viable pollen is moved by hand from the male parent to the female parent. Usually performed in a greenhouse. This initial step in hybrid research allows breeders to produce different genetic combinations for evaluation in succeeding generations.
- HEAD: A flower head on which the spikelets are borne without a stalk as in wheat and barley. Same as *spike* and *ear*.
Figure 1, 4.
- HEAD ROW: A row of plants derived from seed of a single spike or panicle.

HERRINGBONE:	Set at an angle to one another (divergent).
HESSIAN FLY:	A small two-winged fly or midge, very destructive to wheat. <i>Figure 15.</i>
HETEROSIS:	Increased vigor of a hybrid resulting from crossing two unlike parents.
HUSK:	Lemma and palea. Same as <i>glume, chaff and hull.</i> <i>Figure 5, 9.</i>
HYBRID WHEAT:	Wheat from the cross-pollination of a female parent with a male parent.
INBRED:	Parental type that has undergone six or more generations of self-pollination with selection.
INFLECTED:	When the keel of the wheat glume is bent inward in the upper third.
INFLORESCENCE:	The flowering part of a plant. The floral axis with its appendages. Same as <i>spike, panicle and head.</i>
INTERNODE:	The part of stem between two successive nodes. <i>Figure 1, 2.</i>
JOINT:	The node of a grass culm. Same as <i>node.</i> <i>Figure 1, 2.</i>

- KEEL: The main nerve of the wheat glume shaped somewhat like the keel of a boat.
- KERNEL: A single-seeded, dry, indehiscient fruit, with the fruit and seed forming a single grain as in wheat. The lemma and palea are usually fused to the seed in oats and barley. Same as *caryopsis*, *grain*, and *seed*. *Figure 7, 12, 13.*
- LATERAL NERVES: In wheat: the nerves which run along the length of the glume. In barley: two pairs of nerves (inner and outer) lying towards the margin of the lemma and on either side of median nerve.
- LEAF: An expanded outgrowth of a stem in grasses consisting of sheath and blade. *Figure 1, 2.*
- LEAF BLADES: The flat part of leaf of grasses. *Figure 2.*
- LEMMA: The lower or outer of the two bracts of the floret. *Figure 5, 6.*
- LODGED: Lying on the soil, fallen prone. Same as *prostrate*. *Figure 3.*
- LODICULES: Two small translucent scale-like structures situated at the base of the floret and lying between the lemma and the germ. *Figure 6.*
- MALE: Pollen-producing parent in hybrid seed production.
- STERILE: Incapable of viable pollen production. Refers to the male parent, which cannot produce viable pollen.

MATURE: When a seed is ready for harvest.

NICK: The timing of male parent pollen production to coincide with the receptive period of female flowers.

NURSERY TEST: Early testing or evaluation phase in replicated plots.

OBTUSE: Rounded at the apex, contrasted with acute (pointed).

OVARY: The part of the flower which develops into the grain.
Figure 6.

PALEA: The upper or inner of the two bracts of the floret which covers the lower surface of the (creased side) kernel.
Figure 6.

PEDICLE: The stalk of a spikelet.
Figure 5.

PEDIGREE: A table presenting a line of ancestors.

PERICARP: The mature ovary wall which is fused with the testa (seed coat) in the caryopsis.

PEST: Any destructive organism such as disease, weed or insect.

PHENOL REACTION: The color produced in the grain of wheat or barley by treatment with a 1 percent solution of phenol in water.

PISTIL: Seed-bearing organ of a flower, consisting of ovary, style, stigma.
Figure 6.

PISTILLATE: Flowers having pistil(s) but no stamen.

P.I. NUMBER: Plant introduction number assigned by USDA plant introduction officer.

PLANT LOUSE: Aphid.
Figure 15.

POLLEN: The powder, produced by anthers, usually yellow in color. Carrier of male gametes.

PRODUCTION BLOCK: Area in which cross-pollination between a female and male parent occurs, resulting in the production of hybrid seed on the female parent.

PROSTRATE: Fallen prone or lying on the ground.
Figure 3.

PUBESCENT: Covered with hair.
Figure 9.

PITTED: Marked with small depressions or pits.

RACHILLA: A small or secondary rachis, axis of spikelet as in grasses.

RACHIS: The main axis of the spike in wheat, rye, and barley and of the panicle in oats.
Figure 5.

RACHIS SEGMENT: One of the parts into which the rachis is divided by adjacent nodes in wheat, rye and barley.

REGISTRATION NO: Number assigned by CSSA upon approval of application containing complete description of cultivar's characteristics.

REPLICATION: A systematic laying out of plots in which each entry is evaluated more than one time at random locations within a given area.

- RESTORATION: Restoring the ability to produce viable pollen.
- RUDIMENTARY: In an imperfectly developed condition; at an early stage of development; arrested at an early stage; vestigial.
- RUST: A disease of grasses and other plants caused by *Uredinales*.
- SAWFLY: A fly that attacks the stem of wheat.
Figure 15.
- SCUR: The lemma beak developed as short awn.
Figure 4.
- SEED -SET: Seed on female plants as a percent of receptive flowers. Percent seed set indicates the level of successful cross-pollination achieved in hybrid seed production.
- SELF POLLINATION: Normal method by which wheat plants produce seeds. Each flower produces and is fertilized by its own pollen.

- SHEATH: The lower part of the leaf that encloses the stem.
Figure 2.
- SHOULDER: The upper edge of the glume in wheat.
Figure 11.
- SMUT: A fungus attacking the cereals. Covered type caused by *Tilletia* and loose or naked type by *Ustilago*.
- SPELTOID: Sport which arises spontaneously in wheat, resembling spelt wheat in certain features.
- SPICULES: Minute teeth occurring on the nerves or other parts of the lemma and glume of wheat, barley and oats.
- SPECIES: A population of intra-fertile plants, not usually fertile with another population.
- SPIKE: The inflorescence of wheat, rye and barley.
Same as *head and ear*.
Figure 1, 4.
- STAMEN: The male part of the flower which produces the pollen, consisting of the anther and filament.
Figure 6.
- STERILE SPIKELET: Nonfertile. Does not produce viable seed.

STIGMA: Portion of pistil which receives pollen.
Figure 6.

STRAW: The stem of the wheat plant.
Same as *stem and culm.*
Figure 1.

SUPER-NUMERARY SPIKELET: A rudimentary or partially developed spikelet in wheat usually borne immediately below a normal spikelet at the same rachis node.

SYMMETRICAL: When two halves about the mid-line are equal.

TAPERING: Regularly narrowed to a point.

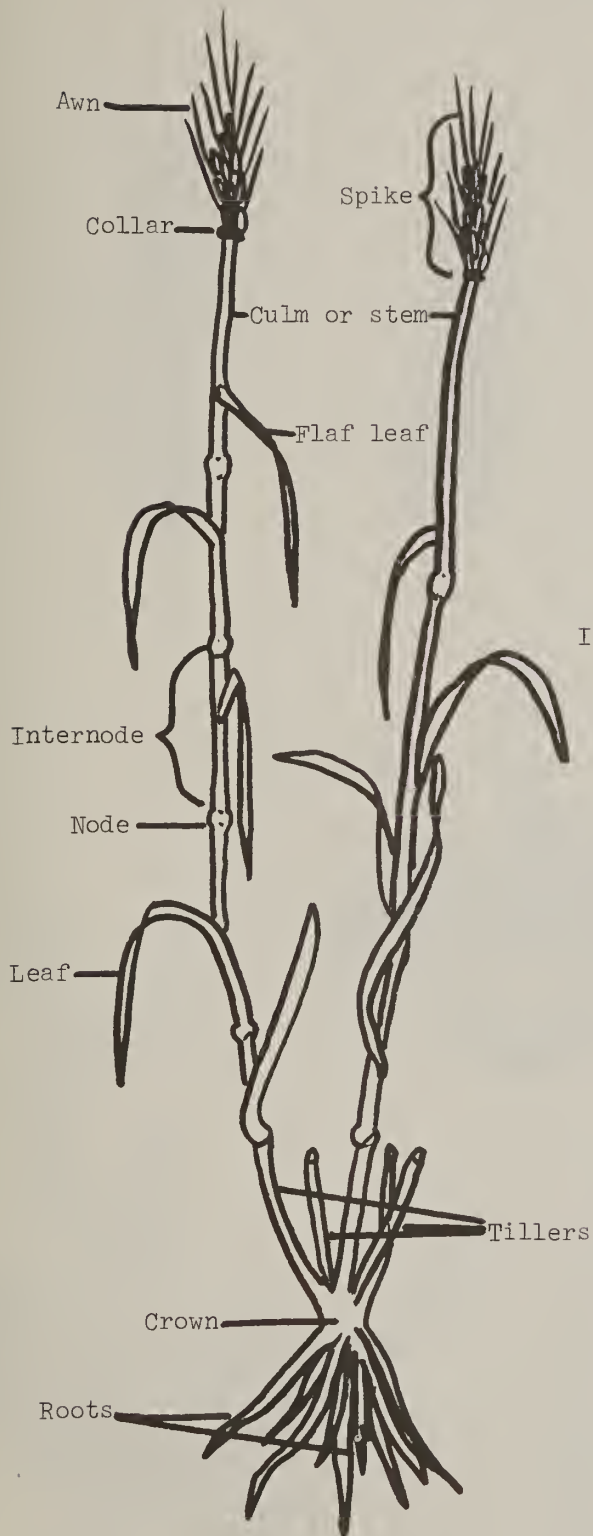
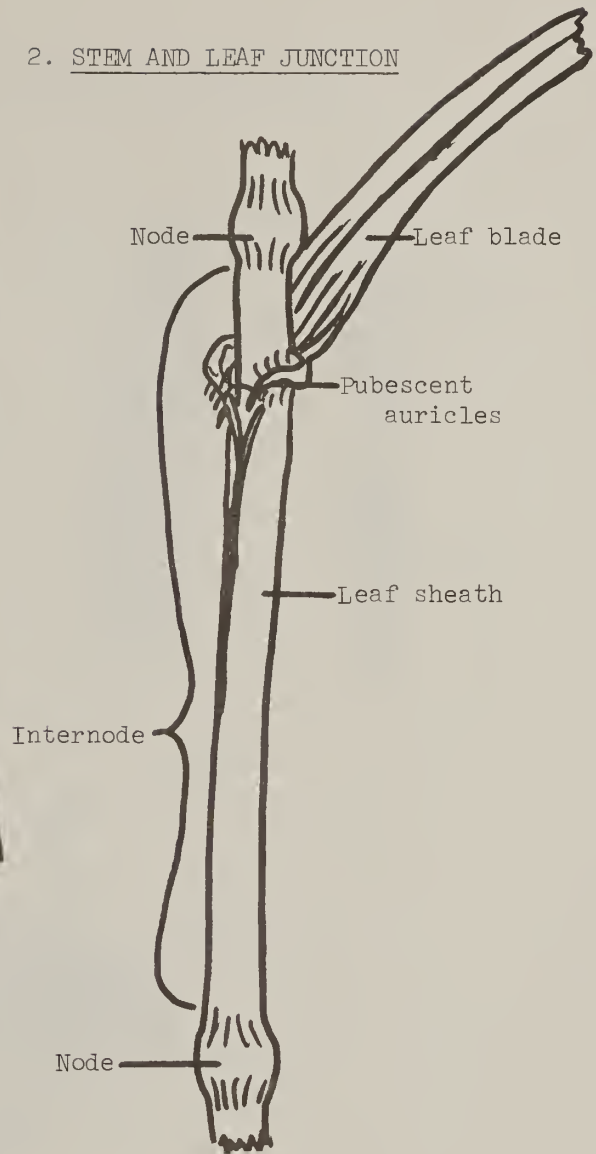
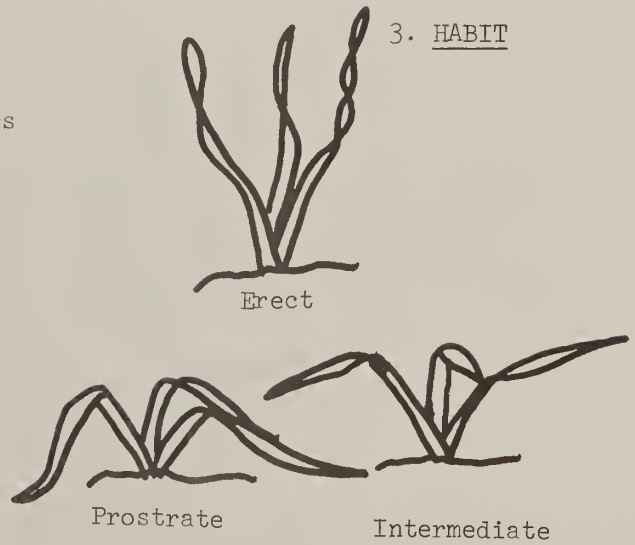
TEST CROSS: Cross designed to reveal characteristics of a parent type.

TESTA: The seed coat.

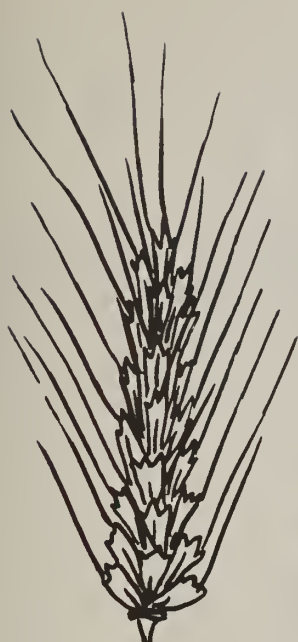
TILLER: Shoot that usually will bear a spike which arises from the base of the stem (common) in the cereals.
Figure 1.

TRAITS: A distinguishing character.

TRITICUM TIMOPHEEVI:	Wheat species and a source of cytoplasmic male sterility and restoration; thus making wheat hybrids economically feasible.
TRUNCATED:	Appearing as though abruptly cut across towards the apex.
UNIQUE:	Single in kind.
VARIETY:	Cultivar developed for cultivation. Same as <i>cultivar</i> .
VENTRAL:	The inner side, furrowed in the grain of wheat and barley, and in caryopsis oats.
VENTRAL FURROW:	The groove running along the length of the ventral side of the caryopsis. /

1. WHEAT PLANT2. STEM AND LEAF JUNCTION3. HABIT

4. HEAD AND KERNEL CHARACTERISTICS



Awned



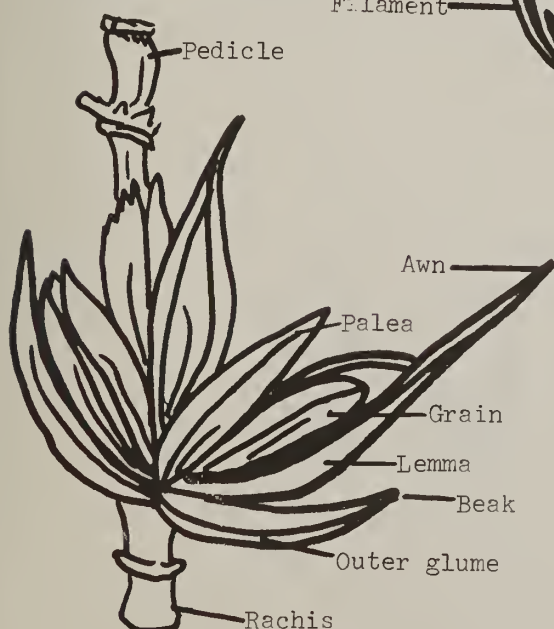
Awnleted



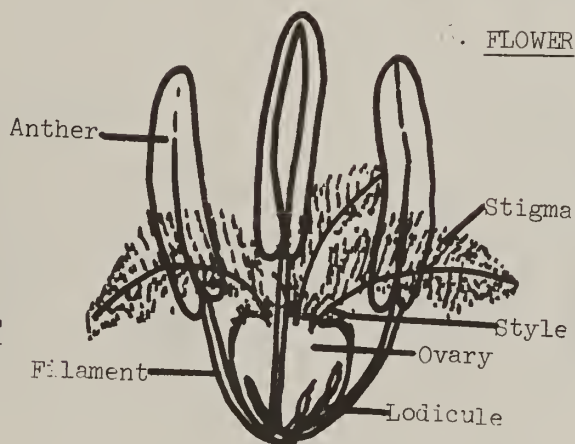
Awnless



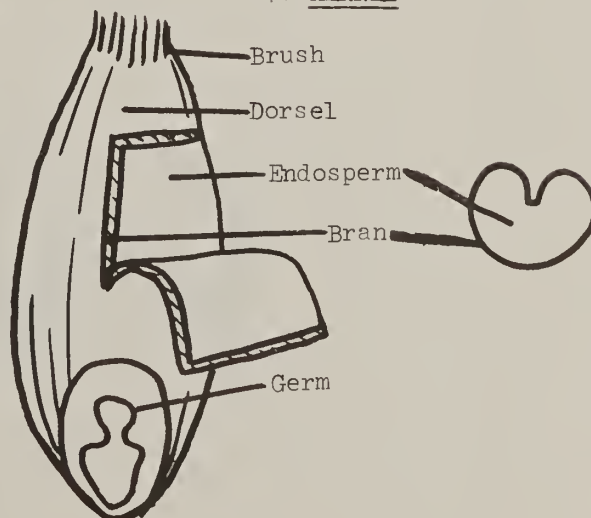
5. SINGLE SPIKELET



6. FLOWER



7. KERNEL



8. BEAK LENGTHS



Seven variations

9. GLUME COVERING



Glabrous Pubescent

10. FLORET



11. SHOULDER SHAPES



Wanting Oblique Rounded Square Elevated Apiculate

12. KERNEL LENGTHS



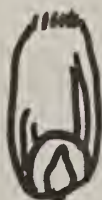
Short (under 6 mm) Mid-long (6-6.5 mm) Long (over 6.5 mm)

13. KERNEL SHAPES



Ovate Elliptical Oval

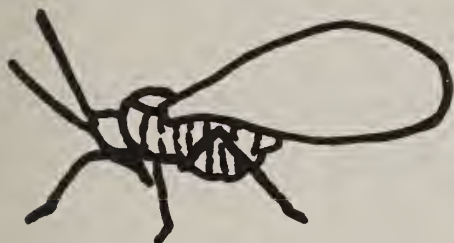
14. BRUSH SIZES



Small Mid-size Large Collared

15. INSECTS
(Greatly enlarged)

Aphid or Greenbug



Mature

Sawfly



Young

Hessian fly



Cereal Leaf Beetle



Adult
4-5 mm



Larva
5-6 mm

WHEAT

CLASS: Soft Red Winter

NAME: AbeNOMENCLATURE: *Triticum aestivum*

CI NO: 15375

RELEASED: 1973

REGISTRATION NO: 562

SELECTION NO: Purdue 65245B12-3-7-7

PEDIGREE: Arthur *4/3/ Purdue 6028A2-15-9-2 /2/ Riley *2/ Riley 67

CULTIVAR DESCRIPTION: Abe is an awnleted soft red winter wheat, distinguishable from Arthur 71 by its blue-green foliage. The spikes are middense, oblong, yellow and generally nodding at maturity. The glumes are midlong and mid-wide, with rounded to square shoulders. Beaks are mid-wide and short to long. Coleoptile color is light purple. Kernels are ovate with rounded cheeks and a middeep crease. The germ is large.

ADAPTATION AND CHARACTERISTICS: Abe is resistant to all known races of Hessian fly in greenhouse and field tests. Like Arthur 71, Abe tends to lose its seedling resistance to Hessian fly at prolonged temperatures of ≥ 21 C. Abe has high resistance to powdery mildew, loose smut and stem rust.

GENERAL INFORMATION: Abe has good milling and baking quality. It is a little softer in kernel texture than Arthur but similar to Arthur in baking potential. It appears widely adapted in the eastern soft wheat region, based on regional tests during 1971 to 1974. Developed by Purdue University and ARS-USDA. Breeder seed available from Agricultural Experiment Stations in Arkansas, Illinois, Kentucky, Maryland, Missouri, Ohio, Pennsylvania and Tennessee.

OTHER SOURCES OF INFORMATION: Fred L. Patterson, Dept. of Agronomy, Purdue University, West Lafayette, Indiana 47907.
Crop Science Vol 15 No 5 p. 736.

WHEAT

CLASS: Hard Red Winter NAME: Baca
NOMENCLATURE: *Triticum aestivum* CI NO: 15891
RELEASED: 1973
REGISTRATION NO: 528
SELECTION NO: CO 64043

PEDIGREE: Single head selection from Scout.

CULTIVAR DESCRIPTION: Baca is midtall, awned, with plant maturity equal to Scout. The spike is fusiform, lax, and inclined. Glumes are white, long, and midwide; shoulders midwide, oblique; beaks acuminate, 3 mm long. Awns are white and 6-8 cm long. Kernels are red, hard, midlong; germ mid-sized, long; crease midwide, shallow; cheeks rounded; brush mid-sized, short.

ADAPTATION AND CHARACTERISTICS: Baca has good stem rust resistance but is susceptible to prevalent races of leaf rust. It is susceptible to dwarf smut. Baca has recommended for all dryland areas of Colorado with the exception of the northwest, where dwarf smut is a problem.

GENERAL INFORMATION: Baca has very good milling and baking properties. Developed at Colorado State University. Breeder seed will be maintained at Colorado State Experiment Station.

OTHER SOURCES OF INFORMATION: J. R. Welsh, Colorado State University, Fort Collins, Colorado 80521. Crop Science Vol 13, No. 5, pg. 584.

WHEAT

CLASS: Soft White Winter NAME: Barbee

NOMENCLATURE: *Triticum aestivum* CI NO: 17417

RELEASED: June 1976

REGISTRATION NO:

SELECTION NO: WA 5826

PEDIGREE: Omar / Vogel's 1834 Sel 3 /2/ PI 178383 / CI13431

CULTIVAR DESCRIPTION: Barbee is a soft white winter wheat. . It matures about the same as Paha, and is medium height. Its spike is awned, rough, brown and erect at maturity. The glume is brown with short and brown beak. Kernels are medium long, narrow and germ covers most of the end.

ADAPTATION AND CHARACTERISTICS: Resistant to stripe rust, flag smut and common bunt. Lodging resistance is about 5 percent more than Paha. Recommended for growth in 14-18 inch precipitation areas of Washington and Idaho.

GENERAL INFORMATION: Grain yield is equal to or slightly better than that of Paha. Emerges slower than Paha. Milling characteristics are similar to those of Nugaines. Flour qualities are similar to those of Paha. Developed by C. J. Peterson, O.A. Vogel, ARS-USDA and Washington State University. Seed available from Washington State Crop Improvement Association.

OTHER SOURCES OF INFORMATION: C. J. Peterson, Washington State University, Dept. of Agronomy, Pullman, Washington, 99163.

WHEAT

CLASS: Hard Red Spring

NAME: Borah

NOMENCLATURE: *Triticum aestivum*

CI NO: 17267

RELEASED: February 1974

REGISTRATION NO: 553

SELECTION NO: ID 0043

PEDIGREE: Thatcher // Thatcher / Kenya Farmer /3/ III-58-1 //
Frontana /3* Thatcher

CULTIVAR DESCRIPTION: Borah is a hard red spring wheat whose average test weight is between those of Peak 72 and Freemont. It is a semidwarf, with moderately stiff straw that averages about 3 inches shorter than Peak 72 and Freemont. Intermediate in maturing and has awned spikes and white glumes.

ADAPTATION AND CHARACTERISTICS: Borah is very resistant to prevalent races of leaf, stem and stripe rust in Idaho.

GENERAL INFORMATION: Borah has satisfactory milling and baking qualities. It is a F_4 line from cross No. 58. It was developed by D. W. Sunderman. Seed may be obtained from H. C. McKay, Supt., Tetonia Branch Experiment Station, P. O. Box 72, St. Anthony, Idaho 83445.

OTHER SOURCES OF INFORMATION: D. W. Sunderman, USDA-ARS,
Branch Experiment Station, P. O. Box AA, Aberdeen,
Idaho 83210.

WHEAT

CLASS: Durum

NAME: Botno

NOMENCLATURE: *Triticum durum*

CI NO: 17283

RELEASED December 1973

REGISTRATION NO:

SELECTION NO: D 6721

PEDIGREE: Langdon /3/ Langdon sel 357 // CI 7780 /
Langdon sel 362 /4/ Br 180 / Wells

CULTIVAR DESCRIPTION: Botno is a durum wheat with long, tan awns and tan glumes. It has a stiff straw and a large kernel size which resulted in a high test weight, however, the kernel weight and test weight were slightly lower than Rolette.

ADAPTATION AND CHARACTERISTICS: Growth characteristics are similar to those of Rolette, but it outyielded Rolette by 5 to 10 percent over a 4-year period in North Dakota and the North Central Area, respectively. Disease reactions are similar to Rolette. Botno should be especially well adapted to northern part of the durum area where earliness is a distinct advantage.

GENERAL INFORMATION: It was lower yielding in North Dakota, but equal in other states when compared to Ward. Milling, processing and cooking properties are satisfactory. It was developed cooperatively by the North Dakota Agricultural Experiment Station, ARS and USDA. Seed may be obtained from: Seedstocks Projects Leader, Agronomy Dept., North Dakota State University, Fargo, North Dakota 58102.

OTHER SOURCES OF INFORMATION: D. C. Ebeltoft, Dept. of Agronomy, North Dakota State University, Fargo, North Dakota 58102.

WHEAT

CLASS: Hard Red Spring NAME: Bounty 309

NOMENCLATURE: *Triticum aestivum* CI NO: 17315

RELEASED: 1974

REGISTRATION NO: 552

SELECTION NO: Cargill 309

PEDIGREE: Request from developer.

CULTIVAR DESCRIPTION: Bounty 309 is a spring semidwarf with hard red kernels. It has medium maturity and is relatively daylength sensitive. Stem is white, strong, spike awned, tapering, middense, multiflorous, inclined; glumes glabrous, long, midwide, white shoulders wanting at base and apiculate at apex, beaks midwide, acuminate, 5-10 mm long; awns white, 3-8 cm long; kernels midlong, elliptical, germ midsize, crease midwide, middeep; cheeks rounded; brush midsize, short.

ADAPTATION AND CHARACTERISTICS: Bounty 309 has stem rust resistance similar to Chris. It is susceptible to certain stem rust races of the group 11-32-113. It has moderate resistance to leaf rust and is not normally infected by ergot. It is adaptable to North Dakota (except where rust is prevalent), South Dakota, western Montana and Arizona.

GENERAL INFORMATION: In quality characteristics Bounty 309 has good absorption, medium dough mixing properties, and good loaf volume. It is slightly lower in protein content but has other milling and baking properties similar to Chris. Developed by Cargill, Inc. Breeder seed is available from Cargill Inc., 2540 East Drake Rd., Fort Collins, Colorado 80521.

OTHER SOURCES OF INFORMATION: Byrd Curtis, 1909 Asage St. Fort Collins, Colorado 80521. Crop Science Vol 15 No 1 p 104

WHEAT

CLASS: Soft Red Winter

NAME: McNair 1587

NOMENCLATURE: *Triticum aestivum*

CI NO: 17279

RELEASED: 1973

REGISTRATION NO:

SELECTION NO:

PEDIGREE: Redcoat sib // Norin 10 / Brevor /6/ Seneca *2/5/
Asosan /3/ Supreza / Redhart // Chancellor /4/ Transfer

CULTIVAR DESCRIPTION: McNair 1587 is a medium height,
midseason, soft, red, winter wheat with blue-
green erect foliage. It has large, plumseeded
light brown awnletted heads.

ADAPTATION AND CHARACTERISTICS: McNair 1587 is moderately
resistant to leaf rust and powdery mildew. It
is also resistant to some races of Hessian Fly
and is less susceptible to stem rust than is
McNair 701.

GENERAL INFORMATION: Developed by McNair Seed Co.,
Laurinburg, North Carolina.

OTHER SOURCES OF INFORMATION: McNair Seed Co., Laurinburg,
North Carolina.

WHEAT

CLASS: Durum

NAME: Produra

NOMENCLATURE: *Triticum durum*

CI NO: 17406

RELEASED: January 1975

REGISTRATION NO:

SELECTION NO: NK 70Y5012

PEDIGREE: Tremez Molle Dwarf /2* Tehuacan /3/ Zenati /
Bouteille / Wells /4/2* Barrigon Yaqui Dwarf /
Tehuacan / Tacur Tipo 125 Dwarf /2* Tehuacan

CULTIVAR DESCRIPTION: Produra is an amber spring durum wheat. The spike is fully-awned, fusiform, mid-dense and inclined. Glumes are pubescent, light tan, long and wide. Shoulders are wanting. Beaks are acuminate, awns are long, black and rough and tend to bleach from the apical end at maturity. The anthers are yellow. It matures about four days earlier than Siete Cerros.

ADAPTATION AND CHARACTERISTICS: Produra is resistant to the races of leaf rust and stem rust prevalent in the United States and also resistant to powdery mildew in the Western United States. It is susceptible to the aphid. It is best adapted to the high yield areas of Arizona and California.

GENERAL INFORMATION: It is slightly shorter than Siete Cerros. Stems are strong and resistance to lodging is better than that of Siete Cerros and equal to or slightly poorer than that of Cajeme 71. Developed by Northrup, King and Co. Seeds are available from the developer.

OTHER SOURCES OF INFORMATION: R. Romig, Northrup, King and Co., 13410 Research Rd., Eden Prairie, Minnesota 55343.

WHEAT

CLASS: Hard Red Spring NAME: Prospur

NOMENCLATURE: *Triticum aestivum* CI NO: 17408

RELEASED: 1975

REGISTRATION NO:

SELECTION NO: 71 T 2

PEDIGREE: Individual plant selection from the cross
Napo 63 // Tezanos Pinto Precoz / Sonora 64A

CULTIVAR DESCRIPTION: Prosper is a hard red spring wheat that matures about the same as Protor. The spikes are fully awned, fusiform, lax and inclined. Glumes are white, midlong to long, and midwide. Shoulders are narrow and apiculate. Kernels are midlong and hard. Beaks are acuminate, about 4-5 mm long.

ADAPTATION AND CHARACTERISTICS: Prosper has good resistance to shattering and lodging. It is resistant to the races of stem rust, e. g. 15B-2, and susceptible to the races of leaf rust prevalent in the Pacific Northwest in 1972. Prosper is resistant to the races of powdery mildew prevalent in the Pacific Northwest in 1972. It is especially well adapted in the United States in the spring wheat growing areas west of the Missouri River outside the high leaf rust hazard areas.

GENERAL INFORMATION: Prosper has good milling characteristics and flour properties suitable for bread or all purpose flour, depending upon protein content. In certain areas it may compete with feed grains as a livestock ration. Developed by CIMMYT. Seed Available from Northrup, King and Co.

OTHER SOURCES OF INFORMATION: R. Romig, Northrup, King and Co., 13410 Research Road, Eden Prairie, Minnesota 55434.

WHEAT

CLASS: Hard Red Winter

NAME: Protor

NOMENCLATURE: *Triticum aestivum*

CI NO: 17409

RELEASED January 1975

REGISTRATION NO:

SELECTION NO: NK 70Y14

PEDIGREE: Individual plant selection from the cross Tobari /
Ciano.

CULTIVAR DESCRIPTION: Protor is a hard red spring wheat.
The spike is awned, fusiform, lax and inclined.
Glumes are white, long, and midwide to wide.
Shoulders are narrow, and square to apiculate.
Beaks are acuminate. Early maturity.

ADAPTATION AND CHARACTERISTICS: Protor is resistant to leaf,
stem and stripe rust prevalent in the United States
in 1971. It is especially well adapted in the
Northwestern United States.

GENERAL INFORMATION: Milling and baking quality for bread
appears to be as good as or slightly better than
Maxigene 1651. Milling performance is excellent.
Developed by CIMMYT. Seed available from Northrup,
King and Company.

OTHER SOURCES OF INFORMATION: R. Romig, Northrup, King
and Company, 13410 Research Rd., Eden Prairie,
Minnesota 55343.

WHEAT

CLASS: Hard Red Winter

NAME: Buckskin

NOMENCLATURE: *Triticum aestivum*

CI NO: 17263

RELEASED: June 1973

REGISTRATION NO:

SELECTION NO: NE 68435

PEDIGREE: Scout /4/ Quivira /2/ Tenmarq /3/ Marquillo / Oro

CULTIVAR DESCRIPTION: Buckskin is a hard red winter wheat with awned white glumes. It is a moderately early variety which is slightly taller, has better straw and lodges less than Scout 66.

ADAPTATION AND CHARACTERISTICS: Buckskin has moderate field resistance to currently prevalent races of stem rust, soilborne mosaic and Hessian fly. It is susceptible to leaf rust but its resistance to bunt, loose smut and wheat streak mosaic have not been fully determined. Buckskin has been intermediate in mildew reaction.

GENERAL INFORMATION: The awns may be black under certain environmental conditions and provide the basis for the variety name. It is not quite so winter hardy as Scout 66. Buckskin has excellent milling and baking characteristics. Flour produces dough with a long mixing requirement and very good mixing tolerance. Loaf volume is good. It is similar to Scout 66 in grain protein. Developed cooperatively by the Nebraska Agricultural Research Experimental Station and ARS-USDA. Breeder seed distributed by Foundation Seed Division, Dept. of Agronomy, University of Nebraska, Lincoln, Nebraska 68503.

OTHER SOURCES OF INFORMATION: V. A. Johnson, North Central Region, University of Nebraska, Lincoln, Nebraska 69503.

WHEAT

CLASS: Durum

NAME: Cando

NOMENCLATURE: *Triticum aestivum*

CI NO: 17438

RELEASED December 1975

REGISTRATION NO:

SELECTION NO: D 7057

PEDIGREE: Lakota /5/ Willet sib // Norin 10 / Brevor /3/
Langdon /6/ Leeds /7/ Br 180 / Wells

CULTIVAR DESCRIPTION: Cando is an awned, spring durum wheat. The stem is semidwarf, strong straw, usually white and with slightly recurved peduncles. The spike is awned, oblong, dense and erect. The glumes are glabrous, yellow, midlong to long, midwide; shoulders narrow, elevated; beaks wide, acuminate. The kernels are amber, hard, midlong and elliptical; germ midsize; crease midwide, shallow; cheeks angular to rounded; and the brush very short.

ADAPTATION AND CHARACTERISTICS: Disease reactions have been similar to Rolette. Cando appears adapted to areas of North Dakota, western Minnesota, northern South Dakota and eastern Montana where adequate moisture, fertility and weed control would encourage the cultivation of semidwarf wheats. Breeder seed and Foundation seed will be maintained at North Dakota Agriculture Experiment Station, Fargo, ND 58102.

OTHER SOURCES OF INFORMATION: D. C. Ebeltoft, Department of Agronomy, North Dakota State University, Fargo, North Dakota 58102.

WHEAT

CLASS: Hard Red Spring

NAME: Canuck

NOMENCLATURE: *Triticum aestivum*

CI NO: 17342.

RELEASED: APRIL 1974

REGISTRATION NO:

SELECTION NO: Swift Current 7530-411

PEDIGREE: Canthatch /3/ Mida / Cadet // Rescue

CULTIVAR DESCRIPTION: Canuck is a hard red spring wheat with a fusiform spike, midlong apically awnletted; glumes midlong, glabrous and white. The shoulders are oblique to rounded, slightly elevated at the tip and the beaks are short, midwide and obtuse. The kernel is ovate, midlong, hard and red with the crease being midwide and middeep. The cheeks are rounded to angular and the brush is midsize and midlong. The germ is midsize and oval. The straw is pithy under most conditions and midlong and white in color.

ADAPTATION AND CHARACTERISTICS: It is medium late in maturity, about a day later than Cypress. Canuck is moderately susceptible to shattering and lodging. It is resistant to sawfly, loose smut, and to head discoloration. It is more resistant than Cypress to common root rot, however, it is susceptible to leaf and stem rust, and to covered smut.

GENERAL INFORMATION: Breeder will be maintained at Provincial Seedstocks Committee, Saskatchewan, Canada.

OTHER SOURCES OF INFORMATION: Dr. Roland Loiselle, Ottawa Research Station, Ottawa, Ontario, Canada K1A 0C6.

WHEAT

CLASS: Hard Red Winter NAME: Cardon

NOMENCLATURE: *Triticum aestivum* CI NO: 17295

RELEASED: 1974

REGISTRATION NO: 565

SELECTION NO: UT 755-90-1

PEDIGREE: Delmar / PI 178383 // Columbia

CULTIVAR DESCRIPTION: Cardon is a hard red winter wheat which is bearded and bronze chaffed. It is of medium height with stiffer straw than Hansel and with medium maturity.

ADAPTATION AND CHARACTERISTICS: Cardon is adapted to dryland use and has good smut resistance. It usually smuts less than 5 percent under conditions where Cache and Bridger show 50 percent smut and Itana 90-100 percent.

GENERAL INFORMATION: Strong mixing properties and good baking quality. Yield data over the past several years from a number of locations in Utah and from Western Regional Nursery indicate that selections are among the better yielding varieties. Developed by the Utah Agricultural Experiment Station. Breeder and Foundation seed will be maintained by the Utah Agricultural Experiment Station, Logan, Utah 84322.

OTHER SOURCES OF INFORMATION: Wade Dewey, Agronomy Dept., Utah State College, Logan Utah 84321, CROP SCIENCE Vol. 15, No. 6, pg. 888.

WHEAT

CLASS: Hard Red Winter

NAME: Cloud

NOMENCLATURE: *Triticum aestivum*

CI NO: 17276

RELEASED: 1973

REGISTRATION NO: 547

SELECTION NO: KS 7016

PEDIGREE: Scout *5/ Agent

CULTIVAR DESCRIPTION: The spike is white, awned, fusiform, erect to nodding and middense. The glumes are white, glabrous, midlong, narrow to midwide with shoulders narrow to midwide and rounded to square and beaks varying from 2 to 6 mm in length. Awns are 4 to 8 cm long. Straw is white, medium to tall in height and medium strong. The germ is mid-sized, the crease is straight and shallow; the cheeks are rounded and the brush is mid-sized.

ADAPTATION AND CHARACTERISTICS: Cloud has better stem rust resistance than Scout and resists most races present in Kansas through 1973. Tolerant to Hessian fly and susceptible to soil-borne mosaic and bunt. It has a low infection of loose smut under most conditions.

GENERAL INFORMATION: Yield has been excellent. Test weight is average. Developed by E. Heyne in cooperation with Kansas State University and the USDA. Foundation seed will be maintained at Kansas Agronomy Experiment Station, Manhattan, Kansas 66506.

OTHER SOURCES OF INFORMATION: Elmer Heyne, Dept. of Agronomy, Kansas State University, Manhattan, Kansas 66502.
CROP SCIENCE Vol. 14, No. 6, pg 909.

WHEAT

CLASS: Soft Red Winter

NAME: Compact

NOMENCLATURE: *Triticum aestivum*

CI NO: 15924

RELEASED: 1974

REGISTRATION NO:

SELECTION NO:

PEDIGREE: Request from Seem Seed Farms.

CULTIVAR DESCRIPTION: Compact is a soft red winter wheat about 3-4 inches shorter than Redcoat. The stem is white; straw, lemon; spike, oblong, clavate, dense; kernel, midlong, ovate shape, medium size. The brush is mid-sized and short. The glume covering is glabrous, brown and medium long and wide. Matures about 1 week earlier than Redcoat.

ADAPTATION AND CHARACTERISTICS: This variety is not pure for resistance or susceptibility to eastern sawfly and is not pure for the W 38 gene for Hessian fly.

GENERAL INFORMATION: Compact was named because of its unusually dense spike. Joseph Seem found the head in a field of Redcoat.

OTHER SOURCES OF INFORMATION: Seem Seed Farms, Inc., R. D. #1, Emmaus, Pa.

WHEAT

CLASS: Durum

NAME: Crosby

NOMENCLATURE: *Triticum durum*

CI NO: 17282

RELEASED: December 1973

REGISTRATION NO:

SELECTION NO: D 6715

PEDIGREE: Langdon *2/ St 464 // Leeds

CULTIVAR DESCRIPTION: Crosby is a durum wheat with long, tan awns and glumes.

ADAPTATION AND CHARACTERISTICS: Crosby is adapted to the traditional durum area in North Dakota. Its growth characteristics are similar to Leeds and so are its disease reactions.

GENERAL INFORMATION: Crosby has slightly higher yield and test weight but weaker straw than Wards. Crosby outyields Leeds by about 14 percent over a 4-year period in North Central area. It has slightly higher kernel weight and slightly lower test weight than Leeds. Overall quality characteristics of Crosby were satisfactory in 3 year drill strip tests. Milling and processing and cooking properties are satisfactory. Spaghetti color is higher than Leeds and Rolette and equal to Ward. Breeder seed will be maintained by the North Dakota Agricultural Experiment Station. Crosby was developed cooperatively by the North Dakota Agricultural Experiment Station, ARS and USDA.

OTHER SOURCES OF INFORMATION: D. C. Ebeltoft, Dept. of Agronomy, North Dakota State University, Fargo, North Dakota 58102.

WHEAT

CLASS: Soft White Winter

NAME: Daws

NOMENCLATURE: *Triticum aestivum*

CI NO: 17419

RELEASED: June 1976

REGISTRATION NO:

SELECTION NO: WA 6099

PEDIGREE: CI 14484 // CI 13645 / PI 178383, VH 66336

CULTIVAR DESCRIPTION: Daws is a soft white winter wheat. It matures about the same as Nugaines. It is a semi-dwarf, spike is awned, rough, white, erect at maturity. The glume is white with short and medium wide beak. Kernels are medium long and narrow with germ covering most of the end.

ADAPTATION AND CHARACTERISTICS: It is resistant to stripe rust and common smut. Lodging resistance is about the same as Nugaines. Recommended for growth in 16-22 inch rainfall areas of Pacific Northwest.

GENERAL INFORMATION: The milling and flour characteristics are similar to those of Nugaines. Daws has equalled or exceeded the grain yields of Nugaines. It emerges slower than Nugaines. Daws was named in honor of Dr. Charles Dawson Moodie, chairman of the Agronomy and Soil Department, Washington State University, 1969-70. Developed cooperatively by ARS-USDA and Washington State University. Seed available from Washington State Crop Improvement Association.

OTHER SOURCES OF INFORMATION: C. J. Peterson, USDA-ARS, Dept. of Agronomy and Soils, Washington State University, Pullman, Washington 99163

WHEAT

CLASS: Soft Red Winter

NAME: Doublecrop

NOMENCLATURE: *Triticum aestivum*

CI NO: 17349

RELEASED: 1975

REGISTRATION NO:

SELECTION NO: Arkansas 6

PEDIGREE: Selection from Arthur.

CULTIVAR DESCRIPTION: Doublecrop is a soft red winter wheat that is 1 to 2 inches shorter than Arthur and more awnletted particularly on the middle and lower florets. About 4 days earlier than Arthur in maturity.

ADAPTATION AND CHARACTERISTICS: Doublecrop is similar to Arthur in disease resistance other than its higher level of field resistance to leaf rust.

GENERAL INFORMATION: It has good milling and baking qualities. Requests for seed should be sent to the resident director of the Northeast Branch Experiment Station at Keiser, Arkansas.

OTHER SOURCES OF INFORMATION: Fred Collins, Department of Agronomy, University of Arkansas, Fayetteville, Arkansas 72703.

WHEAT

CLASS: Hard Red Spring

NAME: Ellar

NOMENCLATURE: *Triticum aestivum*

CI NO: 17289

RELEASED: January 1974

REGISTRATION NO:

SELECTION NO: ND 491

PEDIGREE: Waldron /4/ Kenya Farmer /3/ Lee // Mida / Cadet

CULTIVAR DESCRIPTION: Ellar is a hard red spring wheat of medium height. Its kernels are medium-long, medium-wide and the germ covers most of the end. The glume is white, tapering, medium-wide, has medium beak length and oblique shoulders. The spike is white with semismooth awns. At maturity, the spike is erect. At flowering, the flag leaf is drooping, medium-long and medium-wide. Matures about the same as Waldron.

ADAPTATION AND CHARACTERISTICS: Ellar is resistant to stem and leaf rust. Its maturity and its lodging resistance is about the same as Waldron.

GENERAL INFORMATION: Frequently at maturity the stem will be purple to violet. Recommended for the Northern Plains spring wheat area where Waldron now grows. Developed by North Dakota Agricultural Experiment Station. Seed is available from the developer.

OTHER SOURCES OF INFORMATION: D. C. Ebeltoft, Agronomy Dept., North Dakota State University, Fargo, North Dakota 58102.

WHEAT

CLASS: Soft White Spring NAME: Fielder

NOMENCLATURE: *Triticum aestivum* CI NO: 17268

RELEASED: July 1974

REGISTRATION NO: 554

SELECTION NO: ID 0044

PEDIGREE: Yaktana 54A *4// Norin 10 / Brevor /3/*2 Yaqui 50 /4/
Norin 10 / Brevor // Baart / Onas

CULTIVAR DESCRIPTION: Fielder is a soft white spring wheat that is semidwarf with stiff straw. It is awned with white glumes and medium in maturity.

ADAPTATION AND CHARACTERISTICS: Fielder is resistant to stripe, stem and leaf rust found in Idaho. It is moderately resistant to Idaho races of powdery mildew and to certain races of leaf and stripe rust found elsewhere in the Pacific Northwest.

GENERAL INFORMATION: Fielder has milling and baking qualities similar to Twin. Developed by D. W. Sunderman. Seed may be obtained from H. C. McKay, Supt., Tetonia Branch Experiment Station, P. O. Box 72, St. Anthony, Idaho 83445.

OTHER SOURCES OF INFORMATION: Donald W. Sunderman, USDA-ARS, Branch Experiment Station, P. O. Box AA, Aberdeen, Idaho 83210.

WHEAT

CLASS: Soft Red Winter

NAME: Fuzz

NOMENCLATURE: *Triticum aestivum*

CI NO: 17412

RELEASED: January 1975

REGISTRATION NO:

SELECTION NO: Purdue 6941A3-4

PEDIGREE: Arthur 'type' /3/ Arthur 71 /2/ CI 9321 /
Arthur 71 'type'

CULTIVAR DESCRIPTION: Fuzz is a soft red winter wheat with pubescent leaves.

ADAPTATION AND CHARACTERISTICS: Fuzz derives its cereal leaf beetle resistance from the dense leaf pubescent of the CI 9321 parent. It is similar to Arthur agronomically and possesses the same disease and Hessian fly resistance characteristics but has the added advantage of being highly resistant to the cereal leaf beetle.

GENERAL INFORMATION: Fuzz is agronomically suited for commercial use and is being multiplied currently to be used in a pilot research program to study the effect of a resistant variety on the population dynamics of the cereal leaf beetle.

OTHER SOURCES OF INFORMATION: John Roberts, Lilly Hall of Life Sciences, Dept. of Agronomy, Purdue University, West Lafayette, Indiana 47907.

WHEAT

CLASS: Red Spring NAME: Glenlea
NOMENCLATURE: *Triticum aestivum* CI NO: 17272
RELEASED: May 1972
REGISTRATION NO:
SELECTION NO: UM 714A

PEDIGREE: Pembina *2/ Bage // CB 100

CULTIVAR DESCRIPTION: Glenlea is a spring wheat with red kernels, awnletted, fusiform, semilax and erect spikes. The glumes are glabrous and white. Its straw is strong and medium in length. It matures about 1 day earlier than Neepawa.

ADAPTATION AND CHARACTERISTICS: Glenlea is resistant to prevalent races of leaf and stem rust. It is also resistant to common root rot, loose smut and head discoloration. It is recommended for the moister areas of the Prairie Provinces.

GENERAL INFORMATION: Glenlea was the first Canadian-bred spring utility wheat licensed in Canada. It was licensed in Canada in March 1972. License is 1395. It was developed by Plant Science Dept., University of Manitoba, Winnipeg, Manitoba, Canada. Breeder seed available from the developer.

OTHER SOURCES OF INFORMATION: Roland Loiselle, Ottawa Research Station, Ottawa, Ontario, Canada K1A 0C6.

WHEAT

CLASS: Hard Red Winter NAME: Hansel

NOMENCLATURE: *Triticum aestivum* CI NO: 17296

RELEASED: 1974

REGISTRATION NO: 566

SELECTION NO: UT 755-204

PEDIGREE: Delmar / PI 178383 // Columbia

CULTIVAR DESCRIPTION: Hansel is a hard red winter wheat with awns and bronze chaffs. It has fusiform spikes, is medium to tall in height with white culms. Its straw is limber.

ADAPTATION AND CHARACTERISTICS: Hansel is highly resistant to dwarf smut, rarely registering more than a trace. It has good smut resistance and possesses resistance to races of stripe rust. It has excellent early spring vigor. It is adapted to dryland use but not where irrigated or where lodging is a problem. Has excellent seedling emergence. Resistant to stripe rust in Utah.

GENERAL INFORMATION: Hansel has strong sedimentation and good loaf volume. It has been reported as having particularly good overall qualities. Hansel derives its name from Hansel Valley, one of the chronic dwarf bunt problem areas in northern Utah. Breeder and Foundation seed will be maintained by the Utah Agricultural Experiment Station in Logan, Utah 84322.

OTHER SOURCES OF INFORMATION: W. Dewey, Dept. of Plant Sciences, Utah State University, Logan, Utah 84322. CROP SCIENCE Vol. 15, No. 6, pg. 888.

WHEAT

CLASS: Hard Red Winter

NAME: Heglar

NOMENCLATURE: *Triticum aestivum*

CI NO: 17269

RELEASED: March 1974

REGISTRATION NO: 555

SELECTION NO: ID 0010

PEDIGREE: Cheyenne / UT 175a-53

CULTIVAR DESCRIPTION: Heglar is a hard red winter wheat with white awns and glumes and is moderately tall with stiff straw.

ADAPTATION AND CHARACTERISTICS: Heglar is resistant to common bunt and stripe rust; and susceptible to dwarf bunt, therefore should only be grown in dwarf bunt free areas of southern Idaho. Maturity is medium.

GENERAL INFORMATION: Heglar has satisfactory milling and baking properties. Seed available from H. C. McKay, Supt., Tetonia Branch Experiment Station, P. O. Box 72, St. Anthony, Idaho 83445. Developed by D. W. Sunderman.

OTHER SOURCES OF INFORMATION: D. W. Sunderman, USDA-ARS, Branch Experiment Station, P. O. Box AA, Aberdeen, Idaho 83210. Crop Science Vol. 15, No. 1, pg. 104.

WHEAT

CLASS: Hard Red Winter NAME: HiPlains

NOMENCLATURE: *Triticum aestivum* CI NO: 17262

RELEASED: June 1973

REGISTRATION NO:

SELECTION NO: NE 68427

PEDIGREE: Gage / Lancer

CULTIVAR DESCRIPTION: HiPlains is a hard red winter wheat with awns, white glumes, moderately short, and moderately stiff strawed. It is similar to Lancer in winterhardiness and plant height but has better straw strength.

ADAPTATION AND CHARACTERISTICS: HiPlains is resistant to currently prevalent races of stem rust. Intermediate in reaction to leaf rust, mildew and Hessian fly. Reactions to bunt, loose smut, and weak streak mosaic have not been fully determined. It is similar to Lancer in maturity.

GENERAL INFORMATION: Satisfactory milling and excellent baking characteristics. Flour produces dough with a midlong mixing requirement and good mixing tolerance. Loaf volume is good. Developed by University of Nebraska and V. Johnson in cooperation with the USDA-ARS. Seed available from Nebraska Experimental Station.

OTHER SOURCES OF INFORMATION: Virgil Johnson, Keim Hall, East Campus, University of Nebraska, Lincoln, Nebraska 68503.

WHEAT

CLASS: Hard Red Winter NAME: Homestead

NOMENCLATURE: *Triticum aestivum* CI NO: 17264

RELEASED: June 1973

REGISTRATION NO:

SELECTION NO: NE 68437

PEDIGREE: Scout /4/ Kenya / Newthatch /2/ Cheyenne /
Tenmarq / Mediterranean / Hope /3/ Pawnee /
Cheyenne

CULTIVAR DESCRIPTION: Homestead is a hard red winter wheat that is awned with white glumes. It is moderately short and moderately stiff strawed.

ADAPTATION AND CHARACTERISTICS: Homestead has excellent field resistance to currently prevalent races of stem rust and to soil-borne mosaic. The reactions to bunt, loose smut and wheat streak mosaic have not been fully determined. Mildew infection have been low. It is susceptible to leaf rust and under certain environmental conditions may exhibit considerable darkness of the peduncle and glumes. It also is susceptible to Hessian fly. Since it is 4 to 5 inches shorter than Scout 66, it has better straw and lodges considerably less. Not as hardy as Scout 66. Very good milling and baking qualities. Flour produces dough with medium long mixing requirement and good mixing tolerance. Good loaf volume.

GENERAL INFORMATION: Two years of milling and baking tests rated Homestead above Gage and Lancer in overall quality. It is slightly above average in grain protein content. Developed at University of Nebraska in cooperation with V. Johnson, USDA-ARS. Seed from Northeast Experimental Station.

OTHER SOURCES OF INFORMATION: Virgil Johnson, Keim Hall, East Campus, Dept. of Agronomy, University of Nebraska, Lincoln, Nebraska 68503.

WHEAT

CLASS: Hard Red Winter

NAME: Jeff

NOMENCLATURE: *Triticum aestivum*

CI NO: 17270

RELEASED: February 1974

REGISTRATION NO: 556

SELECTION NO: ID 0037

PEDIGREE: Itana // Kiowa / PI 178383

CULTIVAR DESCRIPTION: Jeff is a tall variety with moderately stiff straw. It is an awned, brown-glumed variety of medium maturity.

ADAPTATION AND CHARACTERISTICS: Jeff is superior to Ranger in seedling vigor and resistance to dwarf bunt. It has a high level of dwarf bunt resistance similar to that of Franklin and it is more resistant to shattering than Franklin. It is highly resistant to stripe rust.

GENERAL INFORMATION: Among varieties grown three years at three Idaho dryland stations, Jeff averaged highest in both yield and test weight. It has satisfactory milling and baking properties. Developed by D. W. Sunderman. Seed may be obtained from H. C. McKay, Supt., Tetonia Branch Experiment Station, P. O. Box 72, St. Anthony, Idaho 83445.

OTHER SOURCES OF INFORMATION: D. W. Sunderman, USDA-ARS, Branch Experiment Station, P. O. Box AA, Aberdeen, Idaho 83210.
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WHEAT

CLASS: Hard Red Winter

NAME: Joleen

NOMENCLATURE: *Triticum aestivum*

CI NO: 17411

RELEASED: January 1975

REGISTRATION NO:

SELECTION NO:

PEDIGREE: Field selection from field of Wichita.

CULTIVAR DESCRIPTION: Joleen is a hard red awnless wheat. It is taller and has a stronger stalk than Wichita. Its head is also much longer and tighter than Wichita.

ADAPTATION AND CHARACTERISTICS: Joleen is adapted to grow in Kansas. Its resistances are similar to Wichita.

GENERAL INFORMATION: This strain of wheat was discovered growing among some Wichita wheat in a field. The discovery consisted of two clumps having the same characteristics except that the head on one clump was slightly lighter colored than the other. The variety was named as a combination of Joseph and Eileen by the farmer who discovered it. It produced a high flour yield with high ash content. Short dough mixing requirement. Seed available from developer: J. A. Ruda.

OTHER SOURCES OF INFORMATION: Joseph A. Ruda, Atwood, Kansas 67730.

WHEAT

CLASS: Hard Red Winter

NAME: Kirwin

NOMENCLATURE: *Triticum aestivum*

CI NO: 17275

RELEASED: 1973

REGISTRATION NO:

SELECTION NO: KS 6623

PEDIGREE: Parker *3/ Bison

CULTIVAR DESCRIPTION: Kirwin is a hard red winter wheat two inches taller than Parker and heads about a day later.

ADAPTATION AND CHARACTERISTICS: Kirwin is resistant to leaf rust but is susceptible to stem rust, loose smut, and bunt and soil-borne mosaic. Kirwin is unique in possessing the characteristics of winterhardiness and shattering resistance in combination with field tolerance for Hessian fly.

GENERAL INFORMATION: This variety should be adapted to areas north and west of where Parker now grows. Developed by E. Heyne in cooperation with Kansas State University and the USDA. Seed may be obtained from Kansas Agricultural Experimental Station, Manhattan, Kansas.

OTHER SOURCES OF INFORMATION: Elmer Heyne, Dept. of Agronomy, Kansas State University, Manhattan, Kansas 66502.

WHEAT

CLASS: Hard Red Spring

NAME: Kitt

NOMENCLATURE: *Triticum aestivum*

CI NO: 17297

RELEASED: March 1975

REGISTRATION NO:

SELECTION NO: MN II-64-33

PEDIGREE: MN II-55-14 / MN II-60-105

CULTIVAR DESCRIPTION: Kitt is a hard red spring semidwarf wheat with yellow straw and chaff with glabrous glumes. The spike is awned, fusiform and middense. Kernels are medium.

ADAPTATION AND CHARACTERISTICS: Kitt is resistant to prevalent races of stem rust and to most other virulent isolates found in low frequency in the recent stem rust surveys. It is tolerant of black chaff and ergot.

GENERAL INFORMATION: Kitt is midseason in maturity and is adapted for sowing in the northern areas of the central wheat growing region. Satisfactory milling performance, mixing characteristics and general bread baking quality. Under conditions of high grain yield it has a tendency toward lower protein, bake absorption and loaf volume when compared to Chris. Developed cooperatively by R. E. Heiner, ARS-USDA, Minnesota Agricultural Experiment Station and University of Minnesota. Breeder seed will be maintained by the Minnesota Agricultural Experiment Station.

OTHER SOURCES OF INFORMATION: R. E. Heiner, Dept. of Agronomy and Plant Genetics, University of Minnesota, St. Paul, Minnesota 55108.

WHEAT

CLASS: Hard Red Winter

NAME: Lancota

NOMENCLATURE: *Triticum aestivum*

CI NO: 17389

RELEASED: June 1975

REGISTRATION NO:

SELECTION NO: NE 701132

PEDIGREE: Atlas 66 / Comanche // Lancer

CULTIVAR DESCRIPTION: Lancota is a hard red winter wheat that is white glumed and awned. It has straw that is somewhat better than Lancer but similar in height.

ADAPTATION AND CHARACTERISTICS: Lancota is similar to Lancer in stem rust reaction but much superior to Lancer in resistance to leaf rust and septoria leaf blotch.

GENERAL INFORMATION: Lancota is high in protein. It is somewhat less winterhardy than Lancer. Developed cooperatively by the Nebraska Agricultural Experiment Station (John W. Schmidt) and the North Central Region , ARS-USDA (Virgil A. Johnson).

OTHER SOURCES OF INFORMATION: Department of Agronomy, University of Nebraska, Lincoln, Nebraska 68583.

WHEAT

CLASS: Hard Red Winter NAME: Lennox
NOMENCLATURE: *Triticum aestivum* CI NO: 17453
RELEASED: 1975
REGISTRATION NO:
SELECTION NO: WW 1001-1

PEDIGREE: Selection from Mironovskaya.

CULTIVAR DESCRIPTION: Lennox is a partly awned ,hard red winter wheat with erect spike at maturity. The glume is yellow, medium long, medium wide; the shape is tapering with oblique shoulders. The kernel is medium long and medium wide with the germ covering most of the end of the kernel. Matures about 2 days earlier than Yorkstar.

ADAPTATION AND CHARACTERISTICS: Lennox is moderately resistant to mildew and resistant to rust. It has about 10 percent less lodging resistance than Yorkstar. Well adapted to the Atlantic Provinces of Canada.

GENERAL INFORMATION: Lennox has poor milling qualities. It will probably replace Genesee. Developed by Neil C. Stoskopt, Crop Science, University of Guelph, Guelph, Ontario, Canada. Seed available from H. G. Nass, Charlottetown Research Station.

OTHER SOURCES OF INFORMATION: Roland Loiselle, Ottawa Research Station, Ottawa, Ontario, Canada K1A 0C6.

WHEAT

CLASS: Hard Red Spring

NAME: Lew

NOMENCLATURE: *Triticum aestivum*

CI NO: 17429

RELEASED: April 1976

REGISTRATION NO:

SELECTION NO: MT 711

PEDIGREE: Fortuna / S6285

CULTIVAR DESCRIPTION: Lew is a hard, red, spring wheat with a solid stem, white straw and chaff. The spike is awn-letted, fusiform, middense to lax. The kernels are midlong.

ADAPTATION AND CHARACTERISTICS: Lew is midseason in maturity. It is resistant to stripe rust and leaf rust while Tioga is susceptible to both. It is also resistant to stem rust.

GENERAL INFORMATION: Its yield and test weight has an advantage over Tioga. The kernels are similar to those of Fortuna. The spike has a tendency to nod at maturity. Developed cooperatively by F. H. McNeal and Montana State University. Seed request should be sent to the Montana State University.

OTHER SOURCES OF INFORMATION: F. H. McNeal, Plant and Soil Science Department, Montana State University, Bozeman, Montana 59715.

WHEAT

CLASS: Hard Red Winter NAME: Lindon
NOMENCLATURE: *Triticum aestivum* CI NO: 17440
RELEASED: November 1975
REGISTRATION NO:
SELECTION NO: CO 725055

PEDIGREE: II 21183 / CO 62363 // Lancer / KS 62136

CULTIVAR DESCRIPTION: Lindon is a hard red winter wheat medium in height. Matures same as Scout 66. The spike is awned, white and inclined at maturity. Glume is white, pointed, oblique with long, medium wide beak. Kernels are medium long, medium wide and with a midsized germ.

ADAPTATION AND CHARACTERISTICS: Lindon is resistant to stem rust. Lodging is 70 percent less than Scout 66. Recommended eastern Colorado.

GENERAL INFORMATION: Not recommended for growth in very dry seed beds. It can be grown in both irrigated and drylands areas. Developed by Colorado State University. Seeds are available from Colorado State University, Dept. of Agronomy.

OTHER SOURCES OF INFORMATION: J. Welsh, Colorado State University, Fort Collins, Colorado 80523.

WHEAT

CLASS: Durum

NAME: Macoun

NOMENCLATURE: *Triticum durum*

CI NO: 17341

RELEASED: 1974

REGISTRATION NO:

SELECTION NO: DT 332

PEDIGREE: RL 3607 / DT 182

CULTIVAR DESCRIPTION: Macoun is a durum wheat with white glabrous awns, glumes and fusiform spike. The kernels are amber, short to midlong and ovate. Straw is strong and short. Kernels are medium wide and medium long. It matures about 2 days earlier than Hercules. The spikes are erect at maturity.

ADAPTATION AND CHARACTERISTICS: Macoun is resistant to loose smut kernel smudge, bunt and leaf stem rust races prevalent in area. Better lodging resistance than Wascana.

GENERAL INFORMATION: Compared to Wascona, Macoun has a slight advantage in most characteristics because it is shorter, stronger strawed, has a higher bushel weight and is equal in disease resistance. It yields slightly more in the black soil zones of Saskatchewan and Manitoba. It was licensed in Canada in 1974 # 1522. Named after John Macoun, a botanist, who in 1880 collected botanical samples and dispelled the notion that the prairies were not suitable for growing wheat. Developed by Research Stations, Research Branch, Agriculture Canada, Swift Current and Regina, Saskatchewan and Winnipeg, Manitoba, Canada. Breeder seed will be maintained at the Regina Research Station.

OTHER SOURCES OF INFORMATION: D. Leisele, Research Station, Research Branch, Agriculture Canada, Winnipeg, Manitoba R3T 2M9.

WHEAT

CLASS: Hard Red Spring NAME: Napaya

NOMENCLATURE: *Triticum aestivum* CI NO: 17344

RELEASED: 1972

REGISTRATION NO:

SELECTION NO: R. L. 4238

PEDIGREE: Manitou *2 / R. L. 4124.1

CULTIVAR DESCRIPTION: Napaya is an awned, short, hard, red spring wheat. The spike is inclined at maturity, rough and white. The glume is white, medium long, narrow, pointed and has elevated shoulders. The kernel is medium long, medium wide and the germ covers most of the end. It matures about the same as Manitou.

ADAPTATION AND CHARACTERISTICS: Napaya is susceptible to mildew, covered smut, cereal leaf beetle, aphids and saw fly. It is moderately susceptible to leaf rust. It is resistant to loose smut and stem rust. It is adaptable to the Red River Valley area of Manitoba. Lodging resistance is about the same as Manitou.

GENERAL INFORMATION: Napaya is a Manitou with awns added, plus some yield advantages over Manitou. Licensed in Canada in April 1972 # 1405. Developed by Research Station, Research Branch, Agriculture Canada, Winnipeg, Manitoba, Canada. Seed available from the developer.

OTHER SOURCES OF INFORMATION: Roland Loiselle, Ottawa Research Station, Ottawa, Ontario, Canada K1A 0C6.

WHEAT

CLASS: Hard Red Spring

NAME: Newana

NOMENCLATURE: *Triticum aestivum*

CI NO: 17430

RELEASED: April 1976

REGISTRATION NO:

SELECTION NO: MT 7156

PEDIGREE: Sheridan /3/ CI 13253 / 5* Centana

CULTIVAR DESCRIPTION: Newana is a hard red spring selection with white straw and chaff, midseason to late in maturity. The spike is awned, fusiform, and middense. Kernels are red, short, hard and ovate.

ADAPTATION AND CHARACTERISTICS: Newana is a high yielding wheat. It is resistant to loose smut, stripe rust, and stem rust, but it is susceptible to leaf rust. It has a tolerance to septoria diseases which allows it to yield well even while exhibiting visual symptoms. Released for use in Montana and Northern Idaho.

GENERAL INFORMATION: The flour yield of Newana is similar to that of Norana but slightly less than that of standard height varieties recommended in Montana. Developed by Montana State University and F. H. McNeal. Seed May be obtained from the Montana Agricultural Experiment Station.

OTHER SOURCES OF INFORMATION: F. H. McNeal, Plant and Soil Science Dept., Montan State University, Bozeman, Montana 59715.

WHEAT

CLASS: Hard Red Spring NAME: Norana

NOMENCLATURE: *Triticum aestivum* CI NO: 15927

RELEASED: 1973

REGISTRATION NO: 535

SELECTION NO: Mt 7042

PEDIGREE: Sheridan /3/ Norin 10 / Brevor 14 /2/5* Centana

CULTIVAR DESCRIPTION: Norana is a hard red spring wheat with white straw and chaff, semidwarf similar in height to Shortana. The spike is awned, fusiform and middense similar in appearance to Shortana. Awns are white and glumes are glabrous. The kernels are short and ovate, with midsize brush. Maturity is midseason to late.

ADAPTATION AND CHARACTERISTICS: Norana has shown resistance to stem rust, tolerance to septoria, but susceptible to leaf rust.

GENERAL INFORMATION: Average grain yields of Norana have exceeded those of other commonly grown varieties by more than 5 bushels per acre on a statewide basis in Montana. Flour yield is not as high as Fortura, but equals Centana. The baking properties of Centana are satisfactory. Developed by Montana Agricultural Experiment Station and ARS-USDA. Foundation seed will be maintained at Montana Agricultural Experiment Station.

OTHER SOURCES OF INFORMATION: F. H. McNeal, Montana Agricultural Experiment Station, Montana State University, Bozeman, Montana 49715. Crop Science Vol.14 No.1 p.128.

WHEAT

CLASS: Hard White Spring NAME: Norquay

NOMENCLATURE: *Triticum aestivum* CI NO: 17343

RELEASED: 1974

REGISTRATION NO:

SELECTION NO: UM 607A

PEDIGREE: Lerma Rojo / Sonora 64 // Justin

CULTIVAR DESCRIPTION: Norquay is a hard white spring wheat that is semilax, erect, white awns, and white glabrous glumes. Kernels are white, small to midsize, short to midlong, wide to midwide, ovate to oval, the crease is narrow to midwide, middeep brush is small and short. The straw is semidwarf and strong.

ADAPTATION AND CHARACTERISTICS: Norquay is an early maturing variety with good drought tolerance, is well adapted to all parts of the Prairie Provinces, but is somewhat subject to sprouting. Resistant to prevalent races of stem rust, common root rot, head discoloration and susceptible to loose smut.

GENERAL INFORMATION: It is earlier maturing, more widely adapted and equal in yield to Glenlea. Superior to Neepawa and Napayo in yielding ability. Adapted to all parts of the Prairie Provinces. Licensed in Canada in 1974; license # 1520. Developed by Plant Science Dept., University of Manitoba, Winnipeg, Manitoba, Canada. Seed may be obtained from the developer.

OTHER SOURCES OF INFORMATION: Roland Loiselle, Plant Agriculture, Ottawa Research Station, Ottawa, Ontario K1A 0C6.

WHEAT

CLASS: Hard Red Spring

NAME: Nowesta

NOMENCLATURE: *Triticum aestivum*

CI NO: 17390

RELEASED: March 1973

REGISTRATION NO:

SELECTION NO: 363 Bd V

PEDIGREE: Lee /3/ Kenya 338 AA // Lee / Mida /4/ Justin

CULTIVAR DESCRIPTION: Nowesta is a hard red spring wheat of medium height. Its kernels are medium-long and medium-wide with the germ covering most of the end. The glume is white, tapering, wide, has medium beak length and oblique shoulders. The spike is white with semismooth awns. At maturity, the spike is erect. At flowering, the flag leaf is drooping, medium-long and medium-wide. Matures about the same as Waldron

ADAPTATION AND CHARACTERISTICS: Nowesta is resistant to stem and leaf rust. Its maturity and its lodging resistance is about the same as Waldron.

GENERAL INFORMATION: Upper internode often develops purple color as maturity approaches. Recommended for the Northern Plains spring wheat area where Waldron and Era now grows. Developed by Ralph Elliott. Seed is available from Elliott Seed Division.

OTHER SOURCES OF INFORMATION: Ralph Elliott, P. O. Box 401, Drayton, North Dakota 58225.

WHEAT

CLASS: Hard Red Spring

NAME: Olaf

NOMENCLATURE: *Triticum aestivum*

CI NO: 15930

RELEASED: March 1973

REGISTRATION NO:

SELECTION NO: ND 497

PEDIGREE: Waldron / a semidwarf breeding line involving Justin, Conley and Norin 10.

CULTIVAR DESCRIPTION: Olaf is a short statured, awned, hard red spring wheat, but taller than World Seeds 1809 and Era. It matures earlier than Era and later than World Seeds 1809. Larger kernel size than Waldron.

ADAPTATION AND CHARACTERISTICS: Olaf is less susceptible to ergot than Waldron, but equal in lodging resistance, stem and leaf rusts and leaf spotting diseases.

GENERAL INFORMATION: Named in recognition of Olaf M. Gronass who was a technician for 50 years with the hard red spring wheat breeding project of the North Dakota Experiment Station. Olaf has good test weight, acceptable flour yield, ash content, flour water absorption and bread crumb grain and texture. It has low protein, low bread loaf volume and long mixing time. Developed cooperatively by D. C. Ebeltoft, ARS-USDA and North Dakota State University. The North Dakota Experimental Station will maintain Breeder seed of Olaf.

OTHER SOURCES OF INFORMATION: D. C. Ebeltoft, Dept. of Agronomy, North Dakota State University, Fargo, North Dakota. 58102.

WHEAT

CLASS: Hard Red Winter NAME: Osage

NOMENCLATURE: *Triticum aestivum* CI NO: 17292

RELEASED: April 1974

REGISTRATION NO:

SELECTION NO: OK 696731

PEDIGREE: Scout / Agent

CULTIVAR DESCRIPTION: Osage is a hard red winter wheat with white awns and chaff. It is medium late in maturity and is similar to Scout 66 in height and straw strength.

ADAPTATION AND CHARACTERISTICS: Excellent yield in Oklahoma. Resistant to most prevalent North American races of leaf rust except race LR23. Osage has good tolerance to powdery mildew, some tolerance to septoria leaf blotch.

GENERAL INFORMATION: Osage is similar to Scout 66 in baking qualities. Developed by Oklahoma Experiment Station. Osage was released jointly by the Agricultural Experiment Stations in Oklahoma and Texas.

OTHER SOURCES OF INFORMATION: E. Smith, Dept. of Agronomy, Oklahoma University, Stillwater, Oklahoma 74075.

WHEAT

CLASS: Soft White Winter

NAME: Peck

NOMENCLATURE: *Triticum aestivum*

CI NO: 17298

RELEASED: 1974

REGISTRATION NO:

SELECTION NO: ID 71041A

PEDIGREE: Gaines *2/ CI 17250

CULTIVAR DESCRIPTION: Peck is a soft white winter wheat with medium size seeds. It is awnless and semidwarf.

ADAPTATION AND CHARACTERISTICS: Peck has some resistance to smut, stripe rust and footrot. It is susceptible to leaf rust and has slightly better resistance to mildew than Nugaines.

GENERAL INFORMATION: Peck is a bulk of 3 sib lines. It was selected from a single, F₃ family that had good vigor at Moscow in 1969 under conditions of snowmold, cercoperella footrot and poorly drained areas. It is better adapted to poorly drained soils than Nugaines. It has good baking qualities and sedimentary values are medium to low. Developed by W. K. Pope.

OTHER SOURCES OF INFORMATION: W. K. Pope, Dept. of Plant Science, University of Idaho, Moscow, Idaho 83844.

WHEAT

CLASS: Soft Red Winter

NAME: Piening

NOMENCLATURE: *Triticum aestivum*

CI NO: 17274

RELEASED: 1973

REGISTRATION NO:

SELECTION NO:

PEDIGREE: Unknown (Selection from a German variety)

CULTIVAR DESCRIPTION: Piening is a soft red winter wheat with light brown chaff and is medium tall in height.

ADAPTATION AND CHARACTERISTICS: Piening is moderately susceptible to rust.

GENERAL INFORMATION: Yield is approximately 1400 lbs. per acre. It is low in gluten. The bread has good consistancy and flavor but not as light as wheat originating in the dryer region.

OTHER SOURCES OF INFORMATION: R. L. Johnston, Jr., Johnny Apple Seed, Acton, Massachusetts.

WHEAT

CLASS: Hard Red Spring NAME: Portola

NOMENCLATURE: *Triticum aestivum* CI NO: 17415

RELEASED: February 1975

REGISTRATION NO:

SELECTION NO: D 7159

PEDIGREE: CIANO / Siete Cerros 66 /2/ CIANO / Penjamo 62

CULTIVAR DESCRIPTION: Portola is a hard red spring wheat that is short statured and same height as Anza. It is about 10 cm shorter than INIA 66R; 5-10 cm taller than Cajeme 71. The straw is weaker than Anza and other currently grown varieties. The spike is middense and semierect at maturity, white awned and glumed.

ADAPTATION AND CHARACTERISTICS: Portola is moderately susceptible to lodging. It shatters more than Anza and cajeme 71, but about the same as INIA 66R. It is resistant to present stripe rust race in Sacramento Valley. Should be adapted to areas where Anza and INIA 66R are now being grown.

GENERAL INFORMATION: The test weight usually heavier than Anza and about equal to ANIA 66 R. The higher protein content of Portola makes it more desirable than ANZA 66R for bread flours. Selected and named by UCD. Breeder seed maintained by the Dept. of Agronomy and Range Science, UCD.

OTHER SOURCES OF INFORMATION: Department of Agronomy and Range Science, UCD, Davis, CA 95616.

WHEAT

CLASS: Soft White Winter

NAME: Raeder

NOMENCLATURE: *Triticum aestivum*

CI NO: 17418

RELEASED: June 1976

REGISTRATION NO:

SELECTION NO: WA 5988

PEDIGREE: Gaines // PI 178383 / CI 13431

CULTIVAR DESCRIPTION: Raeder is a soft white winter wheat. It matures about the same as Nugaines. It is semidwarf, spike is awned, rough, brown and erect at maturity. The glume is brown with short and narrow beak. Kernels are medium long and narrow with the germ covering most of the end.

ADAPTATION AND CHARACTERISTICS: Raeder is resistant to flag smut, stripe rust, common bunt and some races of dwarf bunt. Lodging resistance is about 5 percent more than Paha. Recommended for growth in heavy soil areas of northern Idaho.

GENERAL INFORMATION: The grain yield of Raeder in the absence of flag smut may be slightly less than that of Nugaines. It has satisfactory milling and flour qualities. Raeder was named in honor of Professor J. M. Raeder, Plant Pathologist, University of Idaho. Developed cooperatively by ARS-USDA, and Washington State University. Seed available from North Idaho Foundation Seed Association.

OTHER SOURCES OF INFORMATION: C. J. Peterson, ARS-USDA, Washington State University, Dept. of Agronomy and Soils, Pullman, Washington 99163.

WHEAT

CLASS: Soft White Winter

NAME: Rew

NOMENCLATURE: *Triticum aestivum*

CI NO: 17294

RELEASED: 1974

REGISTRATION NO:

SELECTION NO: OR 6933

PEDIGREE: Orfed / Elgin // Elmar /3/ Heines VII / Orfed /2/
Elgin /3/ Elmar /4/ CI 13438

CULTIVAR DESCRIPTION: Rew is a soft white winter wheat with beards, white glumes and a lax type of head. It is taller than Hyslop but slightly shorter than Wanser.

ADAPTATION AND CHARACTERISTICS: Rew is resistant to lodging, common and dwarf bunt and moderately resistant to stripe rust.

GENERAL INFORMATION: This variety has a slight tendency to shatter if allowed to stand ripe in the field for an extended period. The milling and baking qualities are similar to that of Hyslop and Nugaines. Rew was named in memory of a farmer, Ronald Rew, who was very active in support of wheat research in Oregon. It was developed cooperatively by Oregon State University and C. R. Rohde.

OTHER SOURCES OF INFORMATION: C. R. Rohde, Pendleton Experiment Station, Pendleton, Oregon 97801.

WHEAT

CLASS: Hard Red Winter NAME: Roughrider

NOMENCLATURE: *Triticum aestivum* CI NO: 17439

RELEASED: December 1975

REGISTRATION NO:

SELECTION NO: ND 7121

PEDIGREE: NB 63265 / Hume /3/ Yogo / Frontana /2/2* Minter

CULTIVAR DESCRIPTION: Roughrider is a hard red winter wheat variety. It is midtall, with a white, midstrong hollow stem; the spikes are awned, fusiform, lax and inclined. Roughrider has a short, narrow glabrous white glume, with shoulders narrow and wanting and acuminate beaks. The kernel is red, midlong hard and ovate with a mid-sized germ, narrow, mid-deep crease, rounded cheeks and midlong brush. Roughrider is similar to Froid except it has shorter stronger straw and better test weight.

ADAPTATION AND CHARACTERISTICS: Roughrider has more resistance to lodging than either Froid or Winoka. Field resistance to stem rust when inoculated in the seedling and adult stages is better than Froid and Winoka. It is adapted in the northern Great Plains, primarily southwestern North Dakota.

GENERAL INFORMATION: Milling and baking qualities are satisfactory. It has bake absorption. The name is taken from President Theodore Roosevelt, who ranched in North Dakota. Developed by North Dakota Agriculture Experiment Station, North Dakota State University and D. C. Ebeltoft. Breeder seed maintained at North Dakota Agricultural Experiment Station.

OTHER SOURCES OF INFORMATION: D. C. Ebeltoft, Dept. of Agronomy, North Dakota State University, Fargo, ND 58102.

WHEAT

CLASS: Durum

NAME: Rugby

NOMENCLATURE: *Triticum durum*

CI NO: 17284

RELEASED: December 1973

REGISTRATION NO: 557

SELECTION NO: D 6722

PEDIGREE: Langdon /3/ Ld 357 // CI 7780 / Ld 362 /4/ Br 180 / Wells

CULTIVAR DESCRIPTION: Rugby is a durum wheat with long tan glumes and yellow chaffs. Rugby combines still straw with high yield, large kernel size, and high test weight.

ADAPTATION AND CHARACTERISTICS: Rugby was essentially equal in yield to Ward in North Dakota and slightly higher when considered over all states. Rugby outyielded Leeds by about 12 percent in North Dakota.

GENERAL INFORMATION: The overall quality of Rugby is excellent when compared with all other North Dakota varieties. The average spaghetti color of Rugby was higher than any other North Dakota cultivar in 1971-1973 tests. Developed by North Dakota Agriculture Experiment Station, ARS-USDA and D. C. Ebeltoft. Seeds may be obtained from Seedstocks Project leader, Agronomy Dept., North Dakota State University, Fargo, North Dakota 58102.

OTHER SOURCES OF INFORMATION: D. C. Ebeltoft, Dept. of Agronomy, North Dakota State University, Fargo, North Dakota 58102.
CROP SCIENCE Vol. 15, No. 4, pg. 604.

WHEAT

CLASS: Soft Red Winter

NAME: Ruler

NOMENCLATURE: *Triticum aestivum*

CI NO: 17314

RELEASED: 1974

REGISTRATION NO:

SELECTION NO: TN 1542

PEDIGREE L494A1-8-5-5 / Lucas

CULTIVAR DESCRIPTION: Ruler is a very short midseason soft red winter wheat with a dark green foliage. The stem is stiff and erect. At maturity the head is only slightly nodding. Ruler produces large, middense, fusiform heads with yellow anthers and round shoulder glumes of medium length, which are awnletted. Head and straw are white-yellow at maturity.

ADAPTATION AND CHARACTERISTICS: Ruler is moderately tolerant to acid soil conditions, very resistant to soil-borne spindle streak mosaic virus and moderately resistant to loose smut. Susceptible to most races of leaf rust stem rust, and moderately susceptible to powdery mildew. Resistant to Great Plains A, C and F races of Hessian fly. Heads about 5 days later than Arthur.

GENERAL INFORMATION: Winterhardiness under Ohio conditions is excellent. Tillering ability is very good. Early fall growth is mostly prostrate to semi-erect. Developed by H. N. Lafever, Ohio State University.

OTHER SOURCES OF INFORMATION: H. N. Lafever, Dept. of Agronomy, Ohio Agriculture Research and Development Center, Wooster, Ohio 44691.

WHEAT

CLASS: Hard Red Winter

NAME: Sentinel

NOMENCLATURE: *Triticum aestivum*

CI NO: 17265

RELEASED: June 1973

REGISTRATION NO:

SELECTION NO: NE 68440

PEDIGREE: Scout /4/ Kenya 58 / Newthatch /2/ Cheyenne / Tenmarq /
Mediterranean / Hope /3/ Pawnee / Cheyenne

CULTIVAR DESCRIPTION: Sentinel is a hard red winter wheat that has white awns and glumes. Since it is 3-4 inches shorter than Scout 66, it has better straw and it lodges considerably less. It has moderately stiff straw and is early in maturity as compared to Scout 66.

ADAPTATION AND CHARACTERISTICS: Sentinel is stem rust resistant selected in the F3 generation. It has field resistance to currently prevalent races of stem rust, and mildew infection has been low. Its reactions to bunt, loose smut, and wheat streak mosaic have not been fully determined, but it is susceptible to leaf rust and Hessian fly. Similar to Scout 66 in winterhardiness.

GENERAL INFORMATION: Very good milling and baking qualities. Flour produces dough with a medium long mixing requirement and good mixing tolerance. The loaf volume is good. Slightly above average grain protein content. Breeder seed will be maintained by Nebraska Agriculture Experiment Station.

OTHER SOURCES OF INFORMATION: Virgil Johnson, North Central Region, University of Nebraska, Lincoln, Nebraska 68503.

WHEAT

CLASS: Hard Red Spring NAME: Sinton

NOMENCLATURE: *Triticum aestivum* CI NO: 17573

RELEASED: 1976

REGISTRATION NO:

SELECTION NO: CT 440

PEDIGREE: Manitou / CT 262

CULTIVAR DESCRIPTION: Sinton is an awnless hard red spring wheat that matures about 2 days later than Neepawa. The spike is fusiform to oblong, awned, midlax to middense, glumes glabrous and white, shoulder narrow and elevated and beaks are tapered and midlong. The kernel shape is midsize to small, midlong to short, midwide to wide, oval to ovate. The germ is midsize and round, and the crease is midwide to wide, shallow to middeep. The brush is midsize to small and midlong. The straw is medium height and strong.

ADAPTATION AND CHARACTERISTICS: Sinton is resistant¹ to leaf rust, stem rust, and moderately resistant to common rootrot, loose smut, and bunt.

GENERAL INFORMATION: Sinton is equal to Marquis and Manitou in quality. It has satisfactory milling and baking qualities. It is named after Robert Sinton, a homesteader in the Regina area and former owner of the present site of Regina Research Station. The Seed Section of the Regina Research Station will be responsible for maintaining Breeder seed of Sinton. Developed by E. A. Hurd, Swift Current Research Station, and L. A. Patterson of Regina Research Station.

OTHER SOURCES OF INFORMATION: E. A. Hurd, Swift Current Research Station, Research Branch, Agriculture, Canada, Swift Current, Saskatchewan, Canada S9H 3X2 and L. A. Patterson, Regina Research Station, Box 440, Regina, Saskatchewan, Canada S4P 3A2.

WHEAT

CLASS: Soft White Winter NAME: Sprague

NOMENCLATURE: *Triticum aestivum* CI NO: 15376

RELEASED: June 1972

REGISTRATION NO:

SELECTION NO: WA 5910

PEDIGREE: PI 181268 / Gaines

CULTIVAR DESCRIPTION: Sprague is a semidwarf, awned, soft white winter wheat. It is moderately early in maturity.

ADAPTATION AND CHARACTERISTICS: Sprague has no post harvest dormancy, emerges quickly, and has moderate resistance to snow molds of winter wheat. Sprague is recommended only for early seeding in snow mold areas of Douglas and Okanogan Counties in Washington.

GENERAL INFORMATION: Sprague was developed by G. W. Bruehl.

OTHER SOURCES OF INFORMATION: G. W. Bruehl, Dept. of Agronomy, Washington State University, Pullman, Washington 99163.

WHEAT

CLASS: Soft Red Winter

NAME: Stoddard

NOMENCLATURE: *Triticum aestivum*

CI NO: 15925

RELEASED: September 1973

REGISTRATION NO: 539

SELECTION NO: MO. W7687

PEDIGREE: Stadler / Redcoat

CULTIVAR DESCRIPTION: Stoddard is a soft red winter wheat with an intermediate growth habit. Plant is of medium height and the straw is white and strong when mature. The spikes are middense with white, glabrous glumes and the awnlets, mainly toward the tip of the spike, may range from 1 to 25 mm in length. Kernels are midlong. Intermediate vegetation growth. Maturity similar to Stadler.

ADAPTATION AND CHARACTERISTICS: Compared with Stadler, Stoddard has produced about 10 percent higher grain yields and the approximately 5 cm shorter straw, has lodged less under Missouri growing conditions. Leaf rust, mildew and Hessian fly resistance have been slightly superior to that of Stadler.

GENERAL INFORMATION: Winterhardiness is similar to that of Stadler but superior to other soft wheat varieties grown in Missouri. Test weight and milling and baking quality are similar to Stadler. Developed cooperatively by ARS-USDA and Missouri Agricultural Experiment Station. Breeder seed will be maintained by the Missouri Agricultural Experiment Station.

OTHER SOURCES OF INFORMATION: Dale Sechler, University of Missouri, Columbia, Missouri 65201. Crop Science, Vol 14 No 4 p. 608.

WHEAT

CLASS: Hard Red Winter

NAME: TAM W-103

NOMENCLATURE: *Triticum aestivum*

CI NO: 17336

RELEASED: 1973

REGISTRATION NO:

SELECTION NO: TX 65A1268

PEDIGREE: Norin 10 /3/ Nebraska 60 // Mediterranean / Hope /4/ Parker

CULTIVAR DESCRIPTION: TAM W-103 is a short-statured hard red wheat which has more prostrate juvenile growth and narrower leaves than Sturdy or TAM W -101. It tillers profusely, similar to Parker and Centuck, and culms curve outward slightly near the crown. The straw and glumes are white. Matures earlier than Sturdy.

ADAPTATION AND CHARACTERISTICS: TAM W-103 is susceptible to leaf rust, stem rust and mildew but is sufficiently early to escape serious damage from the diseases in recommended areas of production.

GENERAL INFORMATION: Probably the shortest semidwarf released to date and adapted to intensive irrigation on the high plains and drylands production in the rolling plains of Texas. Short height may cause harvesting problems in areas of low rainfall. Developed by Texas Agricultural Experiment Station and ARS-USDA, cooperatively.

OTHER SOURCES OF INFORMATION: Ken Porter, Southwestern Great Plains Research Center, Texas Agricultural Experiment Station, Bushland, Texas 79012.

WHEAT

CLASS: Hard Red Spring NAME: Tanori 71

NOMENCLATURE: *Triticum aestivum* CI NO: 17416

RELEASED: February 1975

REGISTRATION NO:

SELECTION NO: II 25717-11Y-3M-1Y-OM

PEDIGREE: Sonora 64 /2/ CIANO 'S' / INIA 66

CULTIVAR DESCRIPTION: Tanori 71 is a short-statured hard red spring wheat that is early maturing when compared to INIA 66R. Its straw strength and its shattering resistance is good. The spikes are fully awned with white glumes and dense spikelets.

ADAPTATION AND CHARACTERISTICS: Tanori 71 is resistant to stripe rust, including the Pitic race that was prevalent in 1974 in the Sacramento Valley of California. Its early maturity makes it desirable for doublecropping or in dryfarmed areas where late season moisture may be limiting. Its a better choice in the Imperial Valley than INIA 66R because of greater resistance to shattering.

GENERAL INFORMATION: It is believed that Tanori 71 may replace INIA 66R in current production areas. Milling and baking qualities have been tested on a small scale. Breeder seed will be maintained by the Dept. of Agronomy and Range Science, UCD. Developed by CIMMYT and INIA.

OTHER SOURCES OF INFORMATION: Department of Agronomy and Range Science, UCD. Davis, CA 95616.

WHEAT

CLASS: Soft White Winter NAME: Tecumseh

NOMENCLATURE: *Triticum aestivum* CI NO: 17287

RELEASED December 1973

REGISTRATION NO: 546

SELECTION NO: A 6629

PEDIGREE: Minhardy / Wabash /5/ Fulz sel / Hungarian /2/ W 38 /3/
Wabash /4/ Fairfield /6/ Redcoat sib / WI 245 /7/ Vigo /4/
Trumbull /2/ Hope / Hussar /3/ Fulhio / Purkof *3/5/
Kenya Farmer

CULTIVAR DESCRIPTION: Tecumseh is a moderately early, soft, white, winter wheat with white glumes, and short with moderately stiff straw. It is 4-5 inches shorter than Yorkstar with shorter heads and high tillering.

ADAPTATION AND CHARACTERISTICS: Tecumseh has excellent field resistance to most of the races of leaf rust and powdery mildew, currently prevalent in Michigan where it is recommended for winter wheat production. It is resistant to the soil-borne wheat spindle streak mosaic virus which has been very prevalent in Michigan, and neighboring states and also to Hessian fly. Has better straw and lodges less than Yorkstar.

GENERAL INFORMATION: Tecumseh has high quality pastry wheat and makes excellent cookies. Developed by E. H. Everson, ARS-USDA and Michigan State University.

OTHER SOURCES OF INFORMATION: E. H. Everson, Dept. of Crop Science, Michigan State University, East Lansing, Michigan 48823.
CROP SCIENCE Vol 14, No 6, pg 908.

WHEAT

CLASS: Soft White Winter

NAME: Ticonderoga

NOMENCLATURE: *Triticum aestivum*

CI NO: 17290

RELEASED: 1974

REGISTRATION NO:

SELECTION NO: NY 57166-17

PEDIGREE: Complex pedigree involving; Genesee, Caldwell No. 8, Cornell wheat X rye, Cornell 595, Heines VII, Brevor, Norin 10, and Avon.

CULTIVAR DESCRIPTION: Ticonderoga is a soft, white, winter wheat. The spike is white, awnless, long, nodding with white chaff. The straw is medium short, but not semidwarf. One of the shortest Cornell varieties.

ADAPTATION AND CHARACTERISTICS: Ticonderoga approaches arrow in lodging resistance. It is moderately resistant to loose smut and powdery mildew, susceptible to bunt and leaf rust. It has shown severe damage from leaf rust in lowered yield and test weight.

GENERAL INFORMATION: Ticonderoga produces a low protein flour with good milling and fair baking qualities; fine granulation indicates cake quality potential, from soft wheat quality laboratory "comparable to other three varieties in all respects except for less mellowness in baking quality." Overall, an outstanding wheat in the areas of low test weight and leaf rust susceptibility. Developed by Neal Jensen and Cornell.

OTHER SOURCES OF INFORMATION: Neal Jensen, Plant Breeding and Biometry Dept., 420 Bradfield Hall, Cornell University, Ithaca, N. Y. 14850.

WHEAT

CLASS: Hard Red Spring

NAME: Tioga

NOMENCLATURE: *Triticum aestivum*

CI NO: 17286

RELEASED: January 1974

REGISTRATION NO:

SELECTION NO: S 6662

PEDIGREE: Fortuna /3/ ND 4 /4/ Rescue // II-50-17 / 51-3349

CULTIVAR DESCRIPTION: Tioga is a hard red spring wheat with kernels that are hard red, midlong and elliptical. The germ is large, and the crease is midwide and deep. The cheeks are angular and the brush is large and midlong. The stem is midtall, white, solid and midstrong. Its glumes are glabrous, white, short, and midwide with shoulders that are midwide and square. The beak is midwide, obtuse, and the spike is dorsoventrally compressed, and oblong to fusiform, middense with apical awns.

ADAPTATION AND CHARACTERISTICS: Tioga is resistant to shattering, sawfly, black chaff, stem rust, but susceptible to leaf rust.

GENERAL INFORMATION: The milling and baking qualities are rated as good. Has slightly lower protein content than Chris, but other characters are similar. Developed by K. L. Lebsock in cooperation with North Dakota State University.

OTHER SOURCES OF INFORMATION: K. L. Lebsock, Dept. of Agronomy, North Dakota State University, Fargo, North Dakota 58102.

WHEAT

CLASS: Hard Red Winter NAME: Trison
NOMENCLATURE: *Triticum aestivum* CI NO: 17278
RELEASED: 1973
REGISTRATION NO: 548
SELECTION NO: KS 65274

PEDIGREE: Triumph / Bison

CULTIVAR DESCRIPTION: Trison is a hard red winter wheat similar to Triumph. The spike is awned, fusiform to oblong, inclined and middense. The glumes are white, glabrous, midlong and midwide with shoulders that are midwide and rounded to square, with beaks varying from 2-5 mm in length. The culm is white with medium height and medium strong straw. The kermels are red, hard, midlong and ovate to elliptical, and the germ is midsized. The crease is nearly straight and shallow to middeep. The cheeks are generally rounded and the brush is midsized. Early maturity.

ADAPTATION AND CHARACTERISTICS: Resistance to bunt cultures found in Kansas, and no loose smut has been observed under natural conditions during the testing of Trison. Susceptible to leaf, stem rust, Hessian fly, soil-borne mosaic and wheat streak mosaic. Trison is early maturing.

GENERAL INFORMATION: Trison has good baking properties. Developed by Elmer Heyne, ARS-USDA and Kansas Agriculture Experiment Station, cooperatively. Foundation seed will be maintained by the Kansas Agriculture Experiment Station, Manhattan, Kansas 66502.

OTHER SOURCES OF INFORMATION: Elmer Heyne, Dept. of Agronomy, Kansas State University, Manhattan, Kansas 66502.
CROP SCIENCE Vol 14, No. 6, pg. 909.

WHEAT

CLASS: Soft White Spring NAME: Urquie

NOMENCLATURE: *Triticum aestivum* CI NO: 17413

RELEASED February 1975

REGISTRATION NO:

SELECTION NO: WA 5876

PEDIGREE: Gaines / Marfed sel. 68-3

CULTIVAR DESCRIPTION: Urquie has awned, white chaff, medium-lax spikes, tall semidwarf plant height and is slightly later (1-2 days) in flowering than Marfed. It has seeds that are longer than those of Marfed but similar to those of Gaines and Nugaines.

ADAPTATION AND CHARACTERISTICS: Urquie carries a type of mature plant resistance to stripe rust but is susceptible in the seedling stage to several local races of the fungus. It is susceptible to leaf rust, moderately susceptible to mildew, and appears to be slightly more susceptible to dryland root rot disease than Marfed or Twin.

GENERAL INFORMATION: Urquie has superior milling properties as well as dual-purpose baking qualities (pastry and bread). It is the first of a series of cold hardy or facultative spring wheats currently under development in Washington. Developed cooperatively by C. F. Konzak, ARS-USDA and Washington State University.

OTHER SOURCES OF INFORMATION: C. F. Konzak, Dept. of Agronomy, Washington State University, Pullman, Washington 99163. E. Donaldson, Department of Agronomy and Dry Land Soils, Research Unit Station, Lind, Washington 99341.

WHEAT

CLASS: Durum

NAME: Wakooma

NOMENCLATURE: *Triticum durum*

CI NO: 17337

RELEASED: 1974

REGISTRATION NO:

SELECTION NO: DT 316

PEDIGREE: Lakota / 2* Pellisseir

CULTIVAR DESCRIPTION: Wakooma has spikes that are black awned, fusiform, midlax to dense. The glumes are white, glabrous and narrow. The kernels are amber, midsized to small, midlong to short, and elliptical to ovate. The straw is medium strong. Matures about 3 days earlier than Hercules.

ADAPTATION AND CHARACTERISTICS: Wakooma is resistant to loose smut, bunt rust and leaf rust, kernel smudge and common root rot. It has less lodging resistance than Hercules. Adaptable to the brown soil zones of Saskatchewan and Alberta.

GENERAL INFORMATION: Similar in most respects but stronger gluten than sister line of Wascana. Macaroni qualities superior to Mindun. Developed by Research Stations, Research Branch, Agriculture Canada, Regina and Swift Current, Saskatchewan, Canada.

OTHER SOURCES OF INFORMATION: R. Loiselle, Ottawa Research Station, Ottawa, Ontario, Canada K1A 0C6.

WHEAT

CLASS: Durum

NAME: Ward

NOMENCLATURE: *Triticum durum*

CI NO: 15892

RELEASED: 1972

REGISTRATION NO: 538

SELECTION NO: D 6674

PEDIGREE: Langdon /3/ Ld 357 // CI 7780 / Ld 362 /4/ Br 180 / Wells

CULTIVAR DESCRIPTION: Ward has short, strong, white culms that may show purplish coloration under some conditions. The spike is awned, oblong, dense, and erect. The glumes are glabrous, yellow, midlong to long, and midwide; the glumes shoulders narrow and elevated; and the beaks wide, acuminate, and 3 to 4 mm long. The awns are yellow and 6 to 16 cm long. The kernels are amber, hard midlong, and elliptical; the germ mid-sized; the crease midwide and shallow; the cheeks angular to rounded; and the brush very short.

ADAPTATION AND CHARACTERISTICS: Ward has higher yielding, and greater resistance to leaf rust and a lower incidence of leaf spotting disease when compared to the durum varieties Rolette, Leeds, Wells and Hercules grown in North Dakota. It is equal to Leeds in stem rust resistance, test weight and kernel weight.

GENERAL INFORMATION: Milling and processing characteristics were excellent and equal to Leeds. Its spaghetti color and overall quality were superior to Rolette, Hercules and Wells. Developed by ARS-USDA and North Dakota State University. Seed from NDSU.

OTHER SOURCES OF INFORMATION: J. S. Quick, Dept. of Agronomy, North Dakota State University, Fargo, ND 58102.

WHEAT

CLASS: Hard Red Spring

NAME: Wared

NOMENCLATURE: *Triticum aestivum*

CI NO: 15926

RELEASED: 1972

REGISTRATION NO:

SELECTION NO: Mn II-62-64

PEDIGREE: II-55-10 /4/ Pembina / II-52-329 /3/ II-53-38 /
II-58-4 / II-53-546

CULTIVAR DESCRIPTION: Wared is a hard, red, spring wheat. The spike is awned, fusiform and middense, being similar to Era and Fletcher. Kernels are short, ovate, and brush is mid-sized. Has white straw and chaff with glabrous glumes. Midseason to late in maturity.

ADAPTATION AND CHARACTERISTICS: Wared is resistant to leaf rust, stem rust, black chaff and bunt. Ergot does not appear to infect Wared. It has good resistance to mildew, fair resistance to the prevalent races of stripe rust, and resistance to many races of stem rust.

GENERAL INFORMATION: Wared is superior in yielding ability to any commonly grown hard, red, spring wheat variety both in irrigated and nonirrigated culture. In low rainfall areas (below 11 inches), It may produce short tillers which are difficult to harvest. Flour yield and other milling properties of Wared are slightly better than Fortuna and equal to Peak 72, but baking properties are superior for white pan bread production. Wared is not strong in dough strength and would not be suitable for use as a blending wheat. Developed by Washington State University and The Washington State Crop Improvement Association. Seed Available from WA State Crop Imp. Ass.

OTHER SOURCES OF INFORMATION: C. Konzak, Dept. of Agronomy and Soil, WA State University, Pullman, WA 99163.

WHEAT

CLASS: Hard Red Spring

NAME: Yecora Rojo

NOMENCLATURE: *Triticum aestivum*

CI NO: 17414

RELEASED: February 1975

REGISTRATION NO:

SELECTION NO: D 7188

PEDIGREE: CIANO /2/ Sonora 64 / Klein Rendidor /3/ 8156

CULTIVAR DESCRIPTION: Yecora Rojo is a hard, red, spring wheat with spreading awns. The spikes are white glumed, moderately lax and curve at maturity. It is short in stature, slightly shorter than Cajeme 71, but may have a few plants 4-6 inches taller. Matures 2-3 days earlier than Cajeme 71.

ADAPTATION AND CHARACTERISTICS: Yecora Rojo has very good lodging resistance. It also has resistance to the Pitic race of stripe rust. It's especially useful in areas where Cajeme 71 is used, such as the main southern desert valleys, especially Imperial Valley.

GENERAL INFORMATION: Because of its short stature, it should be grown with caution in sites where weeds may be inadequately controlled. It should not be grown in upland dryland areas because of its short stature. Developed by CIMMYT, selected and named at UCD. Seed may be obtained from Dept. of Agronomy and Range Science, UCD, Davis, CA 95616.

OTHER SOURCES OF INFORMATION: Department of Agronomy and Range Sciences, UCD, Davis, CA 95616.

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